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United States Nuclear Regulatory Commission
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Byron Station, Units 1 and 2
Renewed Facility Operating License Nos. NPF-37 and NPF-66
NRC Docket Nos. STN 50-454 and STN 50-455

Subject: 2022 Annual Radioactive Effluent Release Report (ARERR)

Enclosed is the Annual Radioactive Effluent Release Report for Byron Station. This report is being submitted in accordance with 10 CFR 50.36 a(2), "Technical specifications on effluents from nuclear power reactors," and includes a summary of radiological liquid and gaseous effluents and solid waste released from the site from January 2022 through December 2022.

If you have any questions regarding this information, please contact Ms. Zoe Cox, Regulatory Assurance Manager, at (815) 406-2800.

Respectfully,

A handwritten signature in black ink, appearing to read "H. Welt".

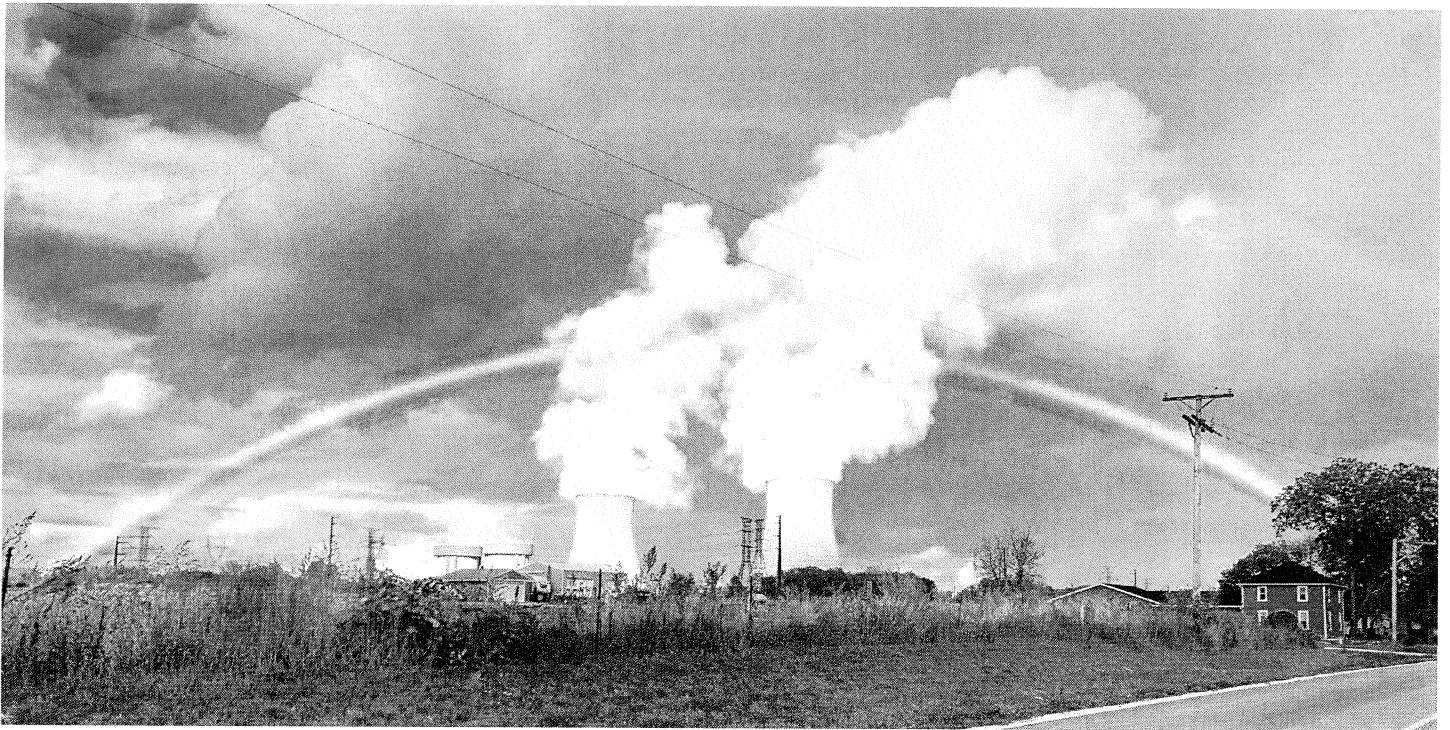
Harris Welt
Site Vice President
Byron Station

HW/AH/JA/hh

Enclosures

cc: Regional Administrator – NRC Region III

**BYRON NUCLEAR POWER STATION
ANNUAL RADIOLOGICAL EFFLUENT RELEASE REPORT (ARERR)
2022**



INTRODUCTION

Liquid effluents from Byron Station are released to the Rock River in controlled batches after radioassay of each batch. Gaseous effluents are released to the atmosphere and are calculated on the basis of analyses of weekly grab samples and grab samples of batch releases prior to the release of noble gases as well as continuously collected composite samples of iodine and particulate radioactivity sampled during the course of the year. The results of effluent analyses are summarized on a monthly basis. Airborne concentrations of noble gases, I-131, and particulate radioactivity in offsite areas are calculated using isotopic composition of effluents and meteorological data. C-14 concentration in offsite areas is calculated based on industry-approved methodology for estimation of the amount released and meteorological data.

Environmental monitoring is conducted by sampling at indicator and control (background) locations in the vicinity of Byron Station to measure changes in radiation or radioactivity levels that may be attributable to station operation. If significant changes attributable to Byron Station are measured, these changes are correlated with effluent releases. An environmental monitoring program is conducted which also includes all potential pathways at the site. Gaseous pathways include ground plane (direct), inhalation, vegetation, meat, and milk.

BYRON NUCLEAR POWER STATION
UNIT 1/2 DOCKET NUMBER STN-50-454/455
RADIOACTIVE EFFLUENT RELEASE REPORT
January 2022 - December 2022
Supplemental Information

1. Regulatory Limits

a. Fission and activation products:

Tech Spec Whole Body	=	500 mrem/year
Skin	=	3000 mrem/year
10CFR50 Gamma	=	5 mrad/quarter; 10 mrad/year
Beta	=	10 mrad/quarter; 20 mrad/year

b. Iodine: (summed with particulate, see below)

c. Particulates with half-lives > 8 days:

Tech Spec Organ	=	1500 mrem/year
10CFR50 Organ	=	7.5 mrem/quarter; 15 mrem/year

d. Liquid Effluents:

10CFR50 Whole Body	=	1.5 mrem/quarter; 3 mrem/year
Organ	=	5 mrem/quarter; 10 mrem/year

2. Maximum Permissible Concentration

- a. Fission and Activation Products: 10CFR20 Appendix B Table 2
- b. Iodine: 10CFR20 Appendix B Table 2
- c. Particulates: 10CFR20 Appendix B Table 2
- d. Liquid Effluents: 10 X 10CFR20 Appendix B Table 2

3. Average Energy: This item is not applicable. The ODCM limits the dose equivalent rates due to the release of noble gases to less than or equal to 500 mrem/year to the total body and less than or equal to 3000 mrem/year to the skin.

4. Measurements and Approximations of Total Radioactivity

- a. Fission and activation products: Prior to release, the isotopic content is determined. Released activity is calculated using volume of release, which is determined by the change in tank level, containment pressure, or containment purge fan flow rates.
- b. Particulate and iodine sampling media for the plant vent stacks are continuously collected and analyzed weekly. Tritium and noble gas analysis for the plant vent stacks are obtained and analyzed weekly.
- c. Liquid effluents: Isotopic analysis is performed on each batch liquid release tank prior to its release. Total release activity is calculated using volume of release. Total tritium activity

released is calculated from the highest of a monthly circulating water blowdown composite activity or a sum of the effluent input composite activities.

- d. All positive results (i.e. higher than the lower limit of detection (LLD)) are reported in units of uCi/cc or uCi/ml unless otherwise noted. All LLD values and the associated LLD requirements are listed in Attachment A.

5. Batch Releases:

a. Liquid:

1. Number of batch releases = 76
2. Total time period for batch releases = 12,521 minutes
3. Maximum time period for a batch release = 522 minutes
4. Average time period for a batch release = 165 minutes
5. Minimum time period for a batch release = 9 minutes
6. Average Rock River stream flow during periods of release of effluent into a flowing stream = 200 m³/sec, based on information from the U.S. Geological Survey Byron Gauging Station.

b. Gaseous:

1. Number of batch releases = 360
2. Total time period for batch releases = 48,648 minutes
3. Maximum time period for a batch release = 6674 minutes
4. Average time period for batch releases = 178 minutes
5. Minimum time period for a batch release = 25 minutes

6. Abnormal Releases:

a. Liquid - None

b. Gaseous – None

7. There was no revisions to the Offsite Dose Calculation Manual (ODCM) in 2022.

8. Errata Data

In the 2021 ARERR the miscellaneous information section should have included the following: “On February 12, 2021, the Circulating Water Blowdown compositor sample line froze and no sample was collected for 24 hours. Compensatory grab sampling was initiated once the condition was identified by sampling at the alternate sample point on the OPR10J radiation monitor at a frequency of once per eight (8) hours until the compositor sample line was thawed and continuous flow restored on the same day.”

9. 2022 Radiological Groundwater Protection Program (RGPP) Results Summary:

In 2022, Radiological Groundwater Protection Program (RGPP) monitoring well designations and sampling frequencies were modified to align with an update to the Nuclear Energy Institute (NEI) 07-07, Groundwater Protection Initiative. In 2022, fourteen (14) monitoring wells were sampled in total. Groundwater samples were obtained in March, June, September, and November for tritium. In addition, gamma isotopic analyses were performed on all wells and Sr-89 and Sr-90 analyses were performed on select wells for the samples obtained in June in accordance with site procedures and the Nuclear Energy Institute (NEI) 07-07, Groundwater Protection Initiative. None of these samples showed detectable concentrations of gamma activity or Sr-89/Sr-90. Three wells contained levels of tritium above the lower limit of detection (LLD) of 200 pCi/L. They were AR-4 (201 pCi/L in March), AR-7 (234 pCi/L in March, 228 pCi/L in June, 230 pCi/L in November), and AR-11 (397 pCi/L in June, 444 pCi/L in November). Wells AR-4 and AR-11 are near the Circulating Water Blowdown piping, where historical leakage through vacuum breakers was known to have occurred. These wells have exhibited an overall decreasing trend since 2006. Tritium in Well AR-7, located on-site just west of plant structures, has been measured in this well slightly above detection limits on an intermittent basis since the well was first drilled in 2006. The tritium present in this well is likely due to legacy tritium prior to 2006 or precipitation recapture and is not believed to be the result of new leaks. The tritium measured in this well has been at or below tritium levels that have been historically measured in rainwater as a result of precipitation recapture from permitted gaseous releases. In August 2014, a break in the well piping was discovered about six feet below the surface that may have served as the entry point for tritium in the recapture water. Tritium present in well AR-7 has exhibited an overall decrease since 2014. None of these wells are used for drinking water, however, should any of the water in these aquifers migrate to off-site wells used for drinking, the off-site dose consequence from tritium present in these wells would be negligible. All groundwater well sample results are well below the drinking water standard of 20,000 pCi/L tritium. AMO Environmental Decisions, a nuclear utility groundwater consultant, has reviewed the 2022 RGPP data and concluded there is no evidence of new or ongoing tritium leak(s) at the site.

SUMMARY

Calculations based on gaseous and liquid effluents and meteorological data indicate that public dose due to radioactive material attributable to Byron Station during the period did not exceed any regulatory or Offsite Dose Calculation Manual (ODCM) limits.

The Total Effective Dose Equivalent (TEDE) due to licensed activities at Byron Station calculated for the maximum exposed individual for the period is 4.97E-01 mrem. The annual limit on TEDE is 100 mrem.

The assessment of radiation doses to the public is performed in accordance with the ODCM. The results of these analyses confirm that the station is operating in compliance with 10CFR50 Appendix I, 10CFR20 and 40CFR190.

There were no additional operational controls implemented in 2022 that affected radiological effluents.

There were no measurements which exceeded the reporting levels, including any that would not have been attributable to station effluents.

The results of the current radiological environmental monitoring program are approximately the same as those found during the pre-operational studies conducted at Byron Station.

Dose Limits to Members of the Public

Byron Station did not exceed any of the dose limits as shown below based on concurrent or historical meteorological data.

- The limits on dose or dose commitment to a member of the public due to radioactive materials in liquid effluents from each reactor is 1.5 mrem to the whole body or 5 mrem to any organ during any calendar quarter and 3 mrem to the whole body or 10 mrem to any organ during a calendar year.
- The limits on air dose due to noble gases released in gaseous effluents to a member of the public from each reactor is 5 mrad for gamma radiation or 10 mrad for beta radiation during any calendar quarter and 10 mrad for gamma radiation or 20 mrad for beta radiation during a calendar year.
- The limits on dose to a member of the public due to radioactive iodine & particulate with half-lives greater than eight days in gaseous effluents released from each reactor is 7.5 mrem to any organ during any calendar quarter and 15 mrem to any organ during a calendar year.
- The annual 10CFR20 limit on Total Effective Dose Equivalent to individual members of the public is 100 mrem.
- The 40CFR190 limits on individual members of the public is 25 mrem to the whole body, 25 mrem to any organ (except thyroid), and 75 mrem to the thyroid.

SITE METEOROLOGY

Detailed records of the site meteorological measurements taken during each calendar quarter of the year are maintained by the meteorological vendor, retained on site, and are available upon request. The data are presented as cumulative joint frequency distributions of the wind direction for the 250' level and wind speed class by atmospheric stability class determined from the temperature difference between the 250' and 30' levels. Data recovery for all measurements on the meteorological tower was 99.8% during 2022.

EFFLUENT AND WASTE DISPOSAL REPORT
TABLE 1A
GASEOUS EFFLUENTS - SUMMATION OF ALL RELEASES
Unit 1

REPORT FOR 2022	Units	QTR 1	QTR 2	QTR 3	QTR 4	YEAR

Fission & Activation Gases						
1. Total Release	Ci	1.11E-01	1.84E-01	1.02E-01	8.24E-02	4.79E-01
2. Avg. Release Rate	μCi/sec	1.42E-02	2.34E-02	1.29E-02	1.04E-02	
Iodine-131						
1. Total Release	Ci	(1)	(1)	(1)	(1)	(1)
2. Avg. Release Rate	μCi/sec	(1)	(1)	(1)	(1)	
Particulates Half Life >= 8 days						
1. Total Release	Ci	(1)	(1)	(1)	(1)	(1)
2. Avg. Release Rate	μCi/sec	(1)	(1)	(1)	(1)	
Carbon-14						
1. Total Release	Ci	1.09E+00	1.11E+00	1.12E+00	1.16E+00	4.47E+00
2. Avg. Release Rate	μCi/sec	1.40E-01	1.41E-01	1.41E-01	1.46E-01	
Tritium						
1. Total Release	Ci	3.59E+00	4.94E+00	3.84E+00	5.86E+00	1.82E+01
2. Avg. Release Rate	μCi/sec	4.62E-01	6.28E-01	4.84E-01	7.37E-01	
Gross Alpha Radioactivity						
1. Total Release	Ci	(1)	(1)	(1)	(1)	(1)
2. Avg. Release Rate	μCi/sec	(1)	(1)	(1)	(1)	

(1) Less than minimum detectable activity which meets the lower limit of detection (LLD) requirements of TRM Section 3.11

EFFLUENT AND WASTE DISPOSAL REPORT
TABLE 1A
GASEOUS EFFLUENTS - SUMMATION OF ALL RELEASES
Unit 2

REPORT FOR 2022	Units	QTR 1	QTR 2	QTR 3	QTR 4	YEAR

Fission & Activation Gases						
1. Total Release	Ci	1.01E-01	1.08E-01	4.52E-02	4.13E-02	2.95E-01
2. Avg. Release Rate	μCi/sec	1.29E-02	1.37E-02	5.69E-03	5.20E-03	
Iodine-131						
1. Total Release	Ci	(1)	(1)	(1)	(1)	(1)
2. Avg. Release Rate	μCi/sec	(1)	(1)	(1)	(1)	
Particulates Half Life >= 8 days						
1. Total Release	Ci	(1)	(1)	(1)	(1)	(1)
2. Avg. Release Rate	μCi/sec	(1)	(1)	(1)	(1)	
Carbon-14						
1. Total Release	Ci	1.12E+00	7.79E-01	1.16E+00	1.11E+00	4.16E+00
2. Avg. Release Rate	μCi/sec	1.44E-01	9.90E-02	1.46E-01	1.39E-01	
Tritium						
1. Total Release	Ci	3.22E+01	3.99E+01	1.42E+01	2.71E+01	1.14E+02
2. Avg. Release Rate	μCi/sec	4.14E+00	5.08E+00	1.79E+00	3.41E+00	
Gross Alpha Radioactivity						
1. Total Release	Ci	(1)	(1)	(1)	(1)	(1)
2. Avg. Release Rate	μCi/sec	(1)	(1)	(1)	(1)	

(1) Less than minimum detectable activity which meets the lower limit of detection (LLD) requirements of TRM Section 3.11

EFFLUENT AND WASTE DISPOSAL REPORT
TABLE 1C
GASEOUS EFFLUENTS - MIXED MODE RELEASES - CONTINUOUS MODE
Unit 1

REPORT FOR	Units	QTR 1	QTR 2	QTR 3	QTR 4	YEAR
Fission and Activation Gases						
Xe-133	Ci	(1)	5.17E-02	1.28E-02	(1)	6.45E-02
Totals for	Ci	(1)	5.17E-02	1.28E-02	(1)	6.45E-02
Iodines						
** No Nuclide Activities **		(1)	(1)	(1)	(1)	(1)
Particulates Half Life >= 8 days						
** No Nuclide Activities **		(1)	(1)	(1)	(1)	(1)
Carbon-14						
C-14	Ci	1.09E+00	1.11E+00	1.12E+00	1.16E+00	4.47E+00
Totals for	Ci	1.09E+00	1.11E+00	1.12E+00	1.16E+00	4.47E+00
Tritium						
H-3	Ci	3.39E+00	4.67E+00	3.57E+00	5.61E+00	1.72E+01
Totals for	Ci	3.39E+00	4.67E+00	3.57E+00	5.61E+00	1.72E+01
Gross Alpha Radioactivity						
** No Nuclide Activities **		(1)	(1)	(1)	(1)	(1)

(1) Less than minimum detectable activity which meets the lower limit of detection (LLD) requirements of TRM Section 3.11

EFFLUENT AND WASTE DISPOSAL REPORT
TABLE 1C
GASEOUS EFFLUENTS - MIXED MODE RELEASES - BATCH MODE
Unit 1

REPORT FOR	Units	QTR 1	QTR 2	QTR 3	QTR 4	YEAR
Fission and Activation Gases						
Ar-41	Ci	7.44E-02	7.98E-02	8.70E-02	7.87E-02	3.20E-01
Kr-85m	Ci	1.23E-04	1.62E-04	(1)	(1)	2.85E-04
Kr-88	Ci	4.42E-05	8.63E-05	(1)	(1)	1.31E-04
Xe-131m	Ci	(1)	5.61E-05	(1)	(1)	5.61E-05
Xe-133m	Ci	8.45E-04	6.68E-04	(1)	(1)	1.51E-03
Xe-133	Ci	3.04E-02	4.21E-02	2.33E-03	3.63E-03	7.85E-02
Xe-135	Ci	4.90E-03	9.07E-03	4.26E-06	(1)	1.40E-02
Totals for	Ci	1.11E-01	1.32E-01	8.94E-02	8.24E-02	4.14E-01
Iodines						
** No Nuclide Activities **		(1)	(1)	(1)	(1)	(1)
Particulates Half Life >= 8 days						
** No Nuclide Activities **		(1)	(1)	(1)	(1)	(1)
Carbon-14						
** No Nuclide Activities **		(1)	(1)	(1)	(1)	(1)
Tritium						
H-3	Ci	2.03E-01	2.66E-01	2.75E-01	2.41E-01	9.85E-01
Totals for	Ci	2.03E-01	2.66E-01	2.75E-01	2.41E-01	9.85E-01
Gross Alpha Radioactivity						
** No Nuclide Activities **		(1)	(1)	(1)	(1)	(1)

(1) Less than minimum detectable activity which meets the lower limit of detection (LLD) requirements of TRM Section 3.11

EFFLUENT AND WASTE DISPOSAL REPORT
TABLE 1C
GASEOUS EFFLUENTS - MIXED MODE RELEASES - CONTINUOUS MODE
Unit 2

REPORT FOR	Units	QTR 1	QTR 2	QTR 3	QTR 4	YEAR
Fission and Activation Gases						
Xe-133	Ci	(1)	5.17E-02	1.28E-02	(1)	6.45E-02
Totals for	Ci	(1)	5.17E-02	1.28E-02	(1)	6.45E-02
Iodines						
** No Nuclide Activities **		(1)	(1)	(1)	(1)	(1)
Particulates Half Life >= 8 days						
** No Nuclide Activities **		(1)	(1)	(1)	(1)	(1)
Carbon-14						
C-14	Ci	1.12E+00	7.79E-01	1.16E+00	1.11E+00	4.16E+00
Totals for	Ci	1.12E+00	7.79E-01	1.16E+00	1.11E+00	4.16E+00
Tritium						
H-3	Ci	3.21E+01	3.98E+01	1.42E+01	2.71E+01	1.13E+02
Totals for	Ci	3.21E+01	3.98E+01	1.42E+01	2.71E+01	1.13E+02
Gross Alpha Radioactivity						
** No Nuclide Activities **		(1)	(1)	(1)	(1)	(1)

(1) Less than minimum detectable activity which meets the lower limit of detection (LLD) requirements of TRM Section 3.11

EFFLUENT AND WASTE DISPOSAL REPORT
TABLE 1C
GASEOUS EFFLUENTS - MIXED MODE RELEASES - BATCH MODE
Unit 2

REPORT FOR	Units	QTR 1	QTR 2	QTR 3	QTR 4	YEAR
Fission and Activation Gases						
Ar-41	Ci	3.36E-02	1.73E-02	2.40E-02	3.13E-02	1.06E-01
Kr-85m	Ci	1.23E-04	1.62E-04	(1)	(1)	2.85E-04
Kr-88	Ci	4.42E-05	8.63E-05	(1)	(1)	1.31E-04
Xe-131m	Ci	(1)	5.61E-05	(1)	(1)	5.61E-05
Xe-133m	Ci	8.45E-04	6.68E-04	(1)	(1)	1.51E-03
Xe-133	Ci	6.12E-02	2.90E-02	8.39E-03	1.00E-02	1.09E-01
Xe-135	Ci	4.90E-03	9.07E-03	4.26E-06	(1)	1.40E-02
Totals for	Ci	1.01E-01	5.63E-02	3.24E-02	4.13E-02	2.31E-01
Iodines						
** No Nuclide Activities **		(1)	(1)	(1)	(1)	(1)
Particulates Half Life >= 8 days						
** No Nuclide Activities **		(1)	(1)	(1)	(1)	(1)
Carbon-14						
** No Nuclide Activities **		(1)	(1)	(1)	(1)	(1)
Tritium						
H-3	Ci	7.54E-02	1.10E-01	3.83E-02	6.57E-02	2.89E-01
Totals for	Ci	7.54E-02	1.10E-01	3.83E-02	6.57E-02	2.89E-01
Gross Alpha Radioactivity						
** No Nuclide Activities **		(1)	(1)	(1)	(1)	(1)

(1) Less than minimum detectable activity which meets the lower limit of detection (LLD) requirements of TRM Section 3.11

EFFLUENT AND WASTE DISPOSAL REPORT
TABLE 2A
LIQUID EFFLUENTS - SUMMATION OF ALL RELEASES
Unit 1

REPORT FOR 2022	Units	QTR 1	QTR 2	QTR 3	QTR 4	YEAR
Fission and Activation Products						
1. Total Release	Ci	3.39E-03	8.50E-03	9.50E-04	1.30E-03	1.41E-02
2. Avg. Diluted Conc.	μCi/ml	1.03E-09	2.46E-09	2.46E-10	3.39E-10	9.79E-10
Tritium						
1. Total Release	Ci	4.40E+02	2.21E+02	6.54E+01	3.47E+02	1.07E+03
2. Avg. Diluted Conc.	μCi/ml	1.34E-04	6.40E-05	1.69E-05	9.02E-05	7.42E-05
Dissolved & Entrained Gases						
1. Total Release	Ci	9.26E-05	7.75E-06	(1)	9.88E-06	1.10E-04
2. Avg. Diluted Conc.	μCi/ml	2.82E-11	2.24E-12	N/A	2.57E-12	7.63E-12
Gross Alpha Radioactivity						
1. Total Release	Ci	9.26E-05	7.75E-06	(1)	9.88E-06	1.10E-04
Volume of liquid waste	Liters	3.28E+09	3.45E+09	3.87E+09	3.85E+09	1.45E+10
Volume of dil. water	Liters	6.56E+09	6.90E+09	7.74E+09	7.69E+09	2.89E+10

(1) Less than minimum detectable activity which meets the lower limit of detection (LLD) requirements of TRM Section 3.11

EFFLUENT AND WASTE DISPOSAL REPORT
TABLE 2A - Batch
LIQUID EFFLUENTS - SUMMATION BY RELEASE POINT
Unit 1

REPORT FOR 2022	Units	QTR 1	QTR 2	QTR 3	QTR 4	YEAR

Fission and Activation Products						
1. Total Release	Ci	3.39E-03	8.50E-03	9.50E-04	1.30E-03	1.41E-02
2. Avg. Diluted Conc.	μCi/ml	3.85E-06	7.83E-06	1.92E-06	2.31E-06	4.67E-06
Tritium						
1. Total Release	Ci	4.21E+02	2.03E+02	5.20E+01	3.27E+02	1.00E+03
2. Avg. Diluted Conc.	μCi/ml	4.77E-01	1.87E-01	1.05E-01	5.79E-01	3.31E-01
Dissolved & Entrained Gases						
1. Total Release	Ci	9.26E-05	7.75E-06	(1)	9.88E-06	1.10E-04
2. Avg. Diluted Conc.	μCi/ml	1.05E-07	7.13E-09	N/A	1.75E-08	3.64E-08
Gross Alpha Radioactivity						
1. Total Release	Ci	9.26E-05	7.75E-06	(1)	9.88E-06	1.10E-04
Volume of liquid waste	Liters	8.82E+05	1.09E+06	4.96E+05	5.65E+05	3.03E+06
Volume of dil. water	Liters	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.89E+10

(1) Less than minimum detectable activity which meets the lower limit of detection (LLD) requirements of TRM Section 3.11

EFFLUENT AND WASTE DISPOSAL REPORT
TABLE 2A - Continuous
LIQUID EFFLUENTS - SUMMATION BY RELEASE POINT
Unit 1

REPORT FOR 2022	Units	QTR 1	QTR 2	QTR 3	QTR 4	YEAR

Fission and Activation Products						
1. Total Release	Ci	(1)	(1)	(1)	(1)	(1)
2. Avg. Diluted Conc.	µCi/ml	N/A	N/A	N/A	N/A	N/A
Tritium						
1. Total Release	Ci	1.89E+01	1.80E+01	1.34E+01	1.98E+01	7.01E+01
2. Avg. Diluted Conc.	µCi/ml	5.76E-06	5.23E-06	3.47E-06	5.14E-06	4.85E-06
Dissolved & Entrained Gases						
1. Total Release	Ci	(1)	(1)	(1)	(1)	(1)
2. Avg. Diluted Conc.	µCi/ml	N/A	N/A	N/A	N/A	N/A
Gross Alpha Radioactivity						
1. Total Release	Ci	(1)	(1)	(1)	(1)	(1)
Volume of liquid waste	Liters	3.28E+09	3.45E+09	3.87E+09	3.85E+09	1.44E+10
Volume of dil. water	Liters	6.56E+09	6.90E+09	7.74E+09	7.69E+09	2.89E+10

(1) Less than minimum detectable activity which meets the lower limit of detection (LLD) requirements of TRM Section 3.11

EFFLUENT AND WASTE DISPOSAL REPORT
TABLE 2A
LIQUID EFFLUENTS - SUMMATION OF ALL RELEASES
Unit 2

REPORT FOR 2022 -----	Units -----	QTR 1 -----	QTR 2 -----	QTR 3 -----	QTR 4 -----	YEAR -----
Fission and Activation Products						
1. Total Release	Ci	3.39E-03	8.50E-03	9.50E-04	1.30E-03	1.41E-02
2. Avg. Diluted Conc.	μCi/ml	1.03E-09	2.46E-09	2.46E-10	3.39E-10	9.79E-10
Tritium						
1. Total Release	Ci	4.40E+02	2.21E+02	6.54E+01	3.47E+02	1.07E+03
2. Avg. Diluted Conc.	μCi/ml	1.34E-04	6.40E-05	1.69E-05	9.02E-05	7.42E-05
Dissolved & Entrained Gases						
1. Total Release	Ci	9.26E-05	7.75E-06	(1)	9.88E-06	1.10E-04
2. Avg. Diluted Conc.	μCi/ml	2.82E-11	2.24E-12	N/A	2.57E-12	7.63E-12
Gross Alpha Radioactivity						
1. Total Release	Ci	9.26E-05	7.75E-06	(1)	9.88E-06	1.10E-04
Volume of liquid waste	Liters	3.28E+09	3.45E+09	3.87E+09	3.85E+09	1.45E+10
Volume of dil. water	Liters	6.56E+09	6.90E+09	7.74E+09	7.69E+09	2.89E+10

(1) Less than minimum detectable activity which meets the lower limit of detection (LLD) requirements of TRM Section 3.11

EFFLUENT AND WASTE DISPOSAL REPORT
TABLE 2A - Batch
LIQUID EFFLUENTS - SUMMATION BY RELEASE POINT
Unit 2

REPORT FOR 2022 -----	Units	QTR 1	QTR 2	QTR 3	QTR 4	YEAR -----
Fission and Activation Products						
1. Total Release	Ci	3.39E-03	8.50E-03	9.50E-04	1.30E-03	1.41E-02
2. Avg. Diluted Conc.	μCi/ml	3.85E-06	7.83E-06	1.92E-06	2.31E-06	4.67E-06
Tritium						
1. Total Release	Ci	4.21E+02	2.03E+02	5.20E+01	3.27E+02	1.00E+03
2. Avg. Diluted Conc.	μCi/ml	4.77E-01	1.87E-01	1.05E-01	5.79E-01	3.31E-01
Dissolved & Entrained Gases						
1. Total Release	Ci	9.26E-05	7.75E-06	(1)	9.88E-06	1.10E-04
2. Avg. Diluted Conc.	μCi/ml	1.05E-07	7.13E-09	N/A	1.75E-08	3.64E-08
Gross Alpha Radioactivity						
1. Total Release	Ci	9.26E-05	7.75E-06	(1)	9.88E-06	1.10E-04
Volume of liquid waste	Liters	8.82E+05	1.09E+06	4.96E+05	5.65E+05	3.03E+06
Volume of dil. water	Liters	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.89E+10

(1) Less than minimum detectable activity which meets the lower limit of detection (LLD) requirements of TRM Section 3.11

EFFLUENT AND WASTE DISPOSAL REPORT
TABLE 2A - Continuous
LIQUID EFFLUENTS - SUMMATION BY RELEASE POINT
Unit 2

REPORT FOR 2022	Units	QTR 1	QTR 2	QTR 3	QTR 4	YEAR
Fission and Activation Products						
1. Total Release	Ci	(1)	(1)	(1)	(1)	(1)
2. Avg. Diluted Conc.	µCi/ml	N/A	N/A	N/A	N/A	N/A
Tritium						
1. Total Release	Ci	1.89E+01	1.80E+01	1.34E+01	1.98E+01	7.01E+01
2. Avg. Diluted Conc.	µCi/ml	5.76E-06	5.23E-06	3.47E-06	5.14E-06	4.85E-06
Dissolved & Entrained Gases						
1. Total Release	Ci	(1)	(1)	(1)	(1)	(1)
2. Avg. Diluted Conc.	µCi/ml	N/A	N/A	N/A	N/A	N/A
Gross Alpha Radioactivity						
1. Total Release	Ci	(1)	(1)	(1)	(1)	(1)
Volume of liquid waste	Liters	3.28E+09	3.45E+09	3.87E+09	3.85E+09	1.44E+10
Volume of dil. water	Liters	6.56E+09	6.90E+09	7.74E+09	7.69E+09	2.89E+10

(1) Less than minimum detectable activity which meets the lower limit of detection (LLD) requirements of TRM Section 3.11

EFFLUENT AND WASTE DISPOSAL REPORT
TABLE 2B
LIQUID EFFLUENTS - BATCH MODE
Unit 1

REPORT FOR	Units	QTR 1	QTR 2	QTR 3	QTR 4	YEAR
Fission and Activation Products						
Te-123m	Ci	(1)	7.04E-05	(1)	(1)	7.04E-05
Cr-51	Ci	6.54E-05	1.88E-04	(1)	(1)	2.53E-04
Mn-54	Ci	3.29E-05	1.55E-05	1.74E-06	3.94E-06	5.41E-05
Co-57	Ci	9.69E-06	2.59E-06	1.27E-06	2.23E-06	1.58E-05
Co-58	Ci	9.77E-04	9.43E-04	6.06E-04	4.53E-04	2.98E-03
Co-60	Ci	1.25E-03	8.00E-04	2.93E-04	2.86E-04	2.63E-03
Ni-63	Ci	(1)	(1)	4.90E-04	5.04E-04	9.94E-04
Zr-95	Ci	(1)	1.28E-06	(1)	(1)	1.28E-06
Nb-95	Ci	1.77E-05	9.83E-06	(1)	(1)	2.75E-05
Ag-110m	Ci	1.47E-06	(1)	(1)	(1)	1.47E-06
Sb-124	Ci	6.24E-06	7.61E-06	(1)	(1)	1.38E-05
Sb-125	Ci	1.03E-03	1.08E-03	4.71E-05	5.34E-05	2.21E-03
Te-125m	Ci	(1)	5.37E-03	(1)	(1)	5.37E-03
Te-132	Ci	(1)	8.83E-06	(1)	(1)	8.83E-06
Cs-137	Ci	(1)	(1)	1.39E-06	(1)	1.39E-06
Totals for	Ci	3.39E-03	8.50E-03	1.44E-03	1.30E-03	1.46E-02
Tritium						
H-3	Ci	4.21E+02	2.03E+02	5.20E+01	3.27E+02	1.00E+03
Totals for	Ci	4.21E+02	2.03E+02	5.20E+01	3.27E+02	1.00E+03
Dissolved and Entrained Gases						
Xe-133	Ci	9.26E-05	7.75E-06	(1)	9.88E-06	1.10E-04
Totals for	Ci	9.26E-05	7.75E-06	(1)	9.88E-06	1.10E-04
Gross Alpha Radioactivity						
** No Nuclide Activities **		(1)	(1)	(1)	(1)	(1)

(1) Less than minimum detectable activity which meets the lower limit of detection (LLD) requirements of TRM Section 3.11

EFFLUENT AND WASTE DISPOSAL REPORT
TABLE 2B
LIQUID EFFLUENTS - CONTINUOUS MODE
Unit 1

REPORT FOR	Units	QTR 1	QTR 2	QTR 3	QTR 4	YEAR
Fission and Activation Products ** No Nuclide Activities **		(1)	(1)	(1)	(1)	(1)
Tritium H-3	Ci	1.89E+01	1.80E+01	1.34E+01	1.98E+01	7.01E+01
Totals for	Ci	1.89E+01	1.80E+01	1.34E+01	1.98E+01	7.01E+01
Dissolved and Entrained Gases ** No Nuclide Activities **		(1)	(1)	(1)	(1)	(1)
Gross Alpha Radioactivity ** No Nuclide Activities **		(1)	(1)	(1)	(1)	(1)

(1) Less than minimum detectable activity which meets the lower limit of detection (LLD) requirements of TRM Section 3.11

EFFLUENT AND WASTE DISPOSAL REPORT
TABLE 2B
LIQUID EFFLUENTS - BATCH MODE
Unit 2

REPORT FOR	Units	QTR 1	QTR 2	QTR 3	QTR 4	YEAR
Fission and Activation Products						
Te-123m	Ci	(1)	7.04E-05	(1)	(1)	7.04E-05
Cr-51	Ci	6.54E-05	1.88E-04	(1)	(1)	2.53E-04
Mn-54	Ci	3.29E-05	1.55E-05	1.74E-06	3.94E-06	5.41E-05
Co-57	Ci	9.69E-06	2.59E-06	1.27E-06	2.23E-06	1.58E-05
Co-58	Ci	9.77E-04	9.43E-04	6.06E-04	4.53E-04	2.98E-03
Co-60	Ci	1.25E-03	8.00E-04	2.93E-04	2.86E-04	2.63E-03
Ni-63	Ci	(1)	(1)	4.90E-04	5.04E-04	9.94E-04
Zr-95	Ci	(1)	1.28E-06	(1)	(1)	1.28E-06
Nb-95	Ci	1.77E-05	9.83E-06	(1)	(1)	2.75E-05
Ag-110m	Ci	1.47E-06	(1)	(1)	(1)	1.47E-06
Sb-124	Ci	6.24E-06	7.61E-06	(1)	(1)	1.38E-05
Sb-125	Ci	1.03E-03	1.08E-03	4.71E-05	5.34E-05	2.21E-03
Te-125m	Ci	(1)	5.37E-03	(1)	(1)	5.37E-03
Te-132	Ci	(1)	8.83E-06	(1)	(1)	8.83E-06
Cs-137	Ci	(1)	(1)	1.39E-06	(1)	1.39E-06
Totals for	Ci	3.39E-03	8.50E-03	1.44E-03	1.30E-03	1.46E-02
Tritium						
H-3	Ci	4.21E+02	2.03E+02	5.20E+01	3.27E+02	1.00E+03
Totals for	Ci	4.21E+02	2.03E+02	5.20E+01	3.27E+02	1.00E+03
Dissolved and Entrained Gases						
Xe-133	Ci	9.26E-05	7.75E-06	(1)	9.88E-06	1.10E-04
Totals for	Ci	9.26E-05	7.75E-06	(1)	9.88E-06	1.10E-04
Gross Alpha Radioactivity						
** No Nuclide Activities **		(1)	(1)	(1)	(1)	(1)

(1) Less than minimum detectable activity which meets the lower limit of detection (LLD) requirements of TRM Section 3.11

EFFLUENT AND WASTE DISPOSAL REPORT
TABLE 2B
LIQUID EFFLUENTS - CONTINUOUS MODE
Unit 2

REPORT FOR	Units	QTR 1	QTR 2	QTR 3	QTR 4	YEAR
Fission and Activation Products ** No Nuclide Activities **		(1)	(1)	(1)	(1)	(1)
Tritium H-3	Ci	1.89E+01	1.80E+01	1.34E+01	1.98E+01	7.01E+01
Totals for	Ci	1.89E+01	1.80E+01	1.34E+01	1.98E+01	7.01E+01
Dissolved and Entrained Gases ** No Nuclide Activities **		(1)	(1)	(1)	(1)	(1)
Gross Alpha Radioactivity ** No Nuclide Activities **		(1)	(1)	(1)	(1)	(1)

(1) Less than minimum detectable activity which meets the lower limit of detection (LLD) requirements of TRM Section 3.11

EFFLUENT AND WASTE DISPOSAL REPORT
Summary of Gaseous and Liquid Effluents Doses to Members of the Public
at the Highest Dose Receptors vs 10CFR50 Design Objectives
Unit 1

Noble Gas	Applicable Dose	Estimated Dose	Age Group	% of Applicable Limit	Design Objective Limit (per year, combined)	Unit
Maximum Location	Gamma Air Dose	1.77E-04	All	1.77E-03	10	mrad
Maximum Location	Beta Air Dose	5.65E-05	All	2.83E-04	20	mrad
Maximum Location	Total Body	1.68E-04	All	3.36E-03	5	mrem
Maximum Location	Skin	2.39E-04	All	1.60E-03	15	mrem
Non-Noble Gas						
Maximum Individual	Bone	1.17E+00	Child	7.79E+00	15	mrem
Liquid						
Maximum Individual	Total Body	1.08E-02	Child	3.61E-01	3	mrem
Maximum Individual	GI-Lli	1.12E-02	Child	1.12E-01	10	mrem

EFFLUENT AND WASTE DISPOSAL REPORT
Summary of Gaseous and Liquid Effluents Doses to Members of the Public
at the Highest Dose Receptors vs 10CFR50 Design Objectives
Unit 2

Noble Gas	Applicable Dose	Estimated Dose	Age Group	% of Applicable Limit	Design Objective Limit (per year, combined)	Unit
Maximum Location	Gamma Air Dose	6.26E-05	All	6.26E-04	10	mrad
Maximum Location	Beta Air Dose	2.59E-05	All	1.30E-04	20	mrad
Maximum Location	Total Body	5.90E-05	All	1.18E-03	5	mrem
Maximum Location	Skin	8.62E-05	All	5.75E-04	15	mrem
Non-Noble Gas						
Maximum Individual	Bone	1.09E+00	Child	7.24E+00	15	mrem
Liquid						
Maximum Individual	Total Body	1.08E-02	Child	3.61E-01	3	mrem
Maximum Individual	GI-Lli	1.12E-02	Child	1.12E-01	10	mrem

EFFLUENT AND WASTE DISPOSAL REPORT
Summary of Doses to Members of the Public
at the Highest Dose Receptors for 40CFR190 and 10CFR72.104 Compliance

Highest Dose Receptors	Noble Gas	Non-Noble Gas	Liquid	On-Site Storage Facilities	Total	% of Applicable Limit	Limit	Unit
Total Body	2.27E-04	4.75E-01	2.17E-02	0.00E+00	4.97E-01	1.99E+00	25	mrem
Organ Dose	N/A	2.25E+00	2.25E-02	0.00E+00	2.28E+00	9.11E+00	25	mrem

SOLID RADIOACTIVE WASTE FOR BURIAL 1ST QUARTER 2022-None

SOLID RADIOACTIVE WASTE FOR BURIAL 2ND QUARTER 2022

DATE Shipment # Description	DISPOSITION OF MATERIAL (DESCRIPTION, CLASS, TYPE AND SOLIDIFYING AGENT)	MODE OF TRANSPORT/ CARRIER	DESTINATION	VOLUME (m ³) PER SHIPMENT	CURIES* PER SHIPMENT
4/22/22 RWS22-01 Resin	UN3321, RADIOACTIVE MATERIAL, LOW SPECIFIC ACTIVITY(LSA-II), 7, METAL BOX(1) CLASS A, NONE	Highway Hitman Transport EXCLUSIVE USE	Gallaher Road Processing Facility Kingston, TN	7.65E+00	2.45E-03
4/28/22 RWS22-02 DAW	UN3321, RADIOACTIVE MATERIAL, LOW SPECIFIC ACTIVITY(LSA-II), 7, METAL BOX(1) CLASS A, NONE	Highway Hitman Transport EXCLUSIVE USE	Energy Solutions Bear Creek Facility Oak Ridge, TN	2.69E+01	1.14E-01
5/5/22 RWS22-03 DAW	UN3321, RADIOACTIVE MATERIAL, LOW SPECIFIC ACTIVITY(LSA-II), 7, METAL BOX(1) CLASS A, NONE	Highway Hitman Transport EXCLUSIVE USE	Energy Solutions Bear Creek Facility Oak Ridge, TN	5.18E+01	1.55E-01
5/7/22 RWS22-04 DAW	UN3321, RADIOACTIVE MATERIAL, LOW SPECIFIC ACTIVITY(LSA-II), 7, METAL BOX(1) CLASS A, NONE	Highway Hitman Transport EXCLUSIVE USE	Energy Solutions Bear Creek Facility Oak Ridge, TN	1.70E+01	1.01E-04
5/8/22 RSW22-05 Sand	UN3321, RADIOACTIVE MATERIAL, LOW SPECIFIC ACTIVITY(LSA-II), 7, METAL BOX(1) CLASS A, NONE	Highway Hitman Transport EXCLUSIVE USE	Energy Solutions Bear Creek Facility Oak Ridge, TN	1.70E+01	8.55E-05
Quarterly Totals		Number of Shipments:	5	1.20E+02	2.72E-01
* Calculated using measured ratios				CUBIC M	CURIES

SOLID RADIOACTIVE WASTE FOR BURIAL 3RD QUARTER 2022

DATE Shipment # Description	DISPOSITION OF MATERIAL (DESCRIPTION, CLASS, TYPE AND SOLIDIFYING AGENT)	MODE OF TRANSPORT/ CARRIER	DESTINATION	VOLUME (m ³) PER SHIPMENT	CURIES* PER SHIPMENT
7/28/22 RWS22-06 Dewatered Resin	UN3321, RADIOACTIVE MATERIAL, LOW SPECIFIC ACTIVITY(LSA-II), 7, METAL CASK (1) CLASS A, NONE	Highway Hitman Transport EXCLUSIVE USE	Energy Solutions Clive Disposal Site Clive, UT	4.39E+00	6.65E+00
8/11/22 RWS22-07 Spent Resin	UN3321, RADIOACTIVE MATERIAL, LOW SPECIFIC ACTIVITY(LSA-II), 7, METAL SHIELDED CASK (1) CLASS A, NONE	Highway Hitman Transport EXCLUSIVE USE	Energy Solutions Clive Disposal Site Clive, UT	4.53E+00	5.19E+00
9/22/22 RWS22-08 Dewatered Resin	UN3321, RADIOACTIVE MATERIAL, LOW SPECIFIC ACTIVITY(LSA-II), 7, METAL SHIELDED CASK (1) CLASS A, NONE	Highway Hitman Transport EXCLUSIVE USE	Energy Solutions Clive Disposal Site Clive, UT	5.03E+00	3.91E+00
Quarterly Totals		Number of Shipments:	3	1.50E+01	1.58E+00
* Calculated using measured ratios				CUBIC M	CURIES

SOLID RADIOACTIVE WASTE FOR BURIAL 4TH QUARTER 2022

DATE Shipment # Description	DISPOSITION OF MATERIAL (DESCRIPTION, CLASS, TYPE AND SOLIDIFYING AGENT)	MODE OF TRANSPORT/ CARRIER	DESTINATION	VOLUME(m ³) PER SHIPMENT	CURIES* PER SHIPMENT
10/6/22 RWS22-09 Dewatered Resin	UN3321, RADIOACTIVE MATERIAL, LOW SPECIFIC ACTIVITY(LSA-II), 7, METAL SHIELDED CASK (1) CLASS A, NONE	Highway Hitman Transport EXCLUSIVE USE	Energy Solutions Clive Disposal Site Clive, UT	4.53E+00	4.38E+00
10/13/22 RWS22-10 Dewatered Resin	UN3321, RADIOACTIVE MATERIAL, LOW SPECIFIC ACTIVITY(LSA-II), 7, METAL SHIELDED CASK (1) CLASS A, NONE	Highway Hitman Transport EXCLUSIVE USE	Energy Solutions Clive Disposal Site Clive, UT	4.96E+00	6.52E+00
10/27/22 RWS22-11 DAW	UN3321, RADIOACTIVE MATERIAL, LOW SPECIFIC ACTIVITY(LSA-II), 7, METAL BOX(1) CLASS A, NONE	Highway Hitman Transport EXCLUSIVE USE	Energy Solutions Bear Creek Facility Oak Ridge, TN	7.10E+01	8.15E-02
11/9/22 RWS22-12 Oil Totes	UN3321, RADIOACTIVE MATERIAL, LOW SPECIFIC ACTIVITY(LSA-II), 7, METAL BOX(1) CLASS A, NONE	Highway Hitman Transport EXCLUSIVE USE	Energy Solutions Bear Creek Facility Oak Ridge, TN	9.17E+00	5.73E-03
12/7/22 RWS22-13 DAW	UN3321, RADIOACTIVE MATERIAL, LOW SPECIFIC ACTIVITY(LSA-II), 7, METAL BOX(1) CLASS A, NONE	Highway Hitman Transport EXCLUSIVE USE	Energy Solutions Bear Creek Facility Oak Ridge, TN	3.58E+01	1.75E-02
12/14/22 RSW22-14 DAW	UN3321, RADIOACTIVE MATERIAL, LOW SPECIFIC ACTIVITY(LSA-II), 7, METAL BOX(1) CLASS A, NONE	Highway Hitman Transport EXCLUSIVE USE	Energy Solutions Bear Creek Facility Oak Ridge, TN	3.58E+01	2.01E-02
Quarterly Totals		Number of Shipments:	6	1.61E+02	1.10E+01
* Calculated using measured ratios				CUBIC M	CURIES

SOLID RADIOACTIVE WASTE FOR BURIAL
Estimated Solid Waste Composition
2022

Resins, Filters, Evap Bottoms			
2022			
Volume (m3) 3.11E+01			
Class A			
Nuclide	% Abund	Curies	uCi/ml
H-3	49.34	1.32E+01	4.24E-01
C-14	0.00	1.51E-04	4.86E-06
Cr-51	0.00	3.21E-04	1.03E-05
Mn-54	0.59	1.58E-01	5.08E-03
Fe-55	6.36	1.70E+00	5.47E-02
Fe-59	0.00	2.36E-04	7.59E-06
Co-57	0.15	4.11E-02	1.32E-03
Co-58	4.00	1.07E+00	3.44E-02
Co-60	9.15	2.44E+00	7.85E-02
Ni-59	0.00	4.05E-06	1.30E-07
Ni-63	28.77	7.68E+00	2.47E-01
Zn-65	0.04	1.15E-02	3.70E-04
Sr-89	0.00	7.42E-09	2.39E-10
Zr-89	0.00	2.44E-03	7.85E-05
Nb-95	0.03	8.36E-03	2.69E-04
Tc-99	0.00	2.89E-07	9.29E-09
Ag-110m	0.01	1.78E-03	5.72E-05
Sn-113	0.01	3.91E-03	1.26E-04
Sn-117m	0.00	1.53E-08	4.92E-10
Sb-124	0.00	9.16E-04	2.95E-05
Sb-125	1.46	3.89E-01	1.25E-02
Te-129m	0.00	6.40E-03	2.06E-04
I-131	0.00	4.91E-11	1.58E-12
Cs-137	0.07	1.75E-02	5.63E-04
Ce-144	0.00	1.00E-07	3.22E-09
Am-241	0.00	1.07E-08	3.44E-10

Dry Active Waste			
2022			
Volume (m3) 2.55E+02			
Class A			
Nuclide	% Abund	Curies	uCi/ml
H-3	11.35	4.44E-02	1.74E-04
C-14	0.13	5.05E-04	1.98E-06
Cr-51	16.39	6.41E-02	2.51E-04
Mn-54	1.20	4.69E-03	1.84E-05
Fe-55	19.73	7.71E-02	3.02E-04
Co-57	0.09	3.53E-04	1.38E-06
Co-58	10.36	4.05E-02	1.59E-04
Co-60	24.65	9.64E-02	3.78E-04
Ni-63	9.50	3.71E-02	1.45E-04
Zr-95	1.59	6.20E-03	2.43E-05
Nb-95	2.98	1.17E-02	4.59E-05
Sb-125	1.56	6.10E-03	2.39E-05
Cs-137	0.33	1.30E-03	5.10E-06
Ce-144	0.07	2.61E-04	1.02E-06
Ra-226	0.05	1.84E-04	7.22E-07
Pu-238	0.00	7.59E-06	2.98E-08
Am-241	0.00	1.06E-05	4.16E-08

Other Waste			
2022			
Volume (m3) 9.17E+00			
Class A			
Nuclide	% Abund	Curies	uCi/ml
H-3	0.66	3.83E-05	4.18E-06
C-14	0.16	9.38E-06	1.02E-06
Cr-51	10.40	5.99E-04	6.53E-05
Mn-54	1.52	8.75E-05	9.54E-06
Fe-55	25.00	1.44E-03	1.57E-04
Co-57	0.11	6.57E-06	7.16E-07
Co-58	11.43	6.58E-04	7.18E-05
Co-60	31.19	1.80E-03	1.96E-04
Ni-63	11.99	6.91E-04	7.54E-05
Zr-95	1.70	9.77E-05	1.07E-05
Nb-95	3.34	1.92E-04	2.09E-05
Sb-125	1.98	1.14E-04	1.24E-05
Cs-137	0.42	2.42E-05	2.64E-06
Ce-144	0.08	4.87E-06	5.31E-07
Pu-238	0.00	1.41E-07	1.54E-08
Ce-146	0.00	1.96E-07	2.14E-08

Irradiated Components			
2022			
Volume (m3) 0.00E+00			
Class N/A			
No Shipments			

SOLID RADIOACTIVE WASTE FOR BURIAL
 Estimated Solid Waste Composition
 2022

Total Combined			
2022			
Volume (m3)		2.96E+02	
Class		A	
Nuclide	% Abund	Curies	uCi/ml
H-3	48.78	1.32E+01	4.46E-02
C-14	0.00	6.64E-04	2.24E-06
Mn-54	0.60	1.63E-01	5.51E-04
Fe-55	6.55	1.77E+00	5.98E-03
Fe-59	0.00	2.39E-04	8.07E-07
Co-57	0.15	4.15E-02	1.40E-04
Co-58	4.09	1.11E+00	3.75E-03
Co-60	9.38	2.54E+00	8.58E-03
Ni-59	0.00	4.05E-06	1.37E-08
Ni-63	28.49	7.71E+00	2.60E-02
Zn-65	0.04	1.15E-02	3.89E-05
Sr-89	0.00	4.42E-09	1.49E-11
Zr-95	0.03	8.73E-03	2.95E-05
Nb-95	0.07	2.02E-02	6.82E-05
Tc-99	0.00	2.89E-07	9.76E-10
Pu-238	0.00	7.73E-06	2.61E-08
Ag-110m	0.01	1.78E-03	6.01E-06
Sb-125	1.46	3.95E-01	1.33E-03
Cs-137	0.07	1.89E-02	6.39E-05
Ce-144	0.00	2.66E-04	8.99E-07
Sn-113	0.01	3.91E-03	1.32E-05
Sn-117m	0.00	1.53E-08	5.17E-11
Sb-124	0.00	9.16E-04	3.09E-06
Am-241	0.00	1.08E-05	3.65E-08
Te-129m	0.00	6.40E-05	2.16E-07
Ra-226	0.00	1.84E-04	6.22E-07
I-131	0.00	4.91E-11	1.66E-13

Process Control Program (PCP) for Radioactive Wastes

There were no changes to RW-AA-100, Process Control Program (PCP) for Radioactive Waste, in 2022.

Error Analysis

The following is an estimate of the errors associated with effluent monitoring and analysis. The estimate is calculated using the square root of the sum of the squares methodology.

1. Gaseous Effluents

Qme=3.33%
RM=N/A
ECe=5%
Stdcse/Smplcse=5%
qme=N/A

Total error = 7.8%

2. Liquid Effluents

Qme=3.33%
RM=N/A
ECe=N/A
Stdcse/Smplcse=5%
qme=2.22%

Total error = 6.4%

3. Waste Resin

Qme=10.0%
RM=N/A
ECe=5%
Stdcse/Smplcse=5%
qme=1.0%

Total error = 12.3%

4. DAW, Mechanical Filters, and Contaminated Metal

Qme=10.0%
RM=N/A
ECe=N/A
Stdcse/Smplcse=5%
qme=N/A

Instrument calibration error = 10%

Total error = 11.2%

Qme = the process quantity measurement error associated with the release point (e.g. flow, level measurements)

RM = error associated with the radiation monitor used in quantifying releases through the release point

ECe = error associated with the collection efficiency of the sample media

Stdcse = one-sigma counting error associated with the counting instrument of interest

Smplcse = one-sigma counting error associated with a sample of a given geometry that is used for the release point of interest

qme = sample quantity measurement error associated with the sample of interest

Miscellaneous Information

- A. As required by Technical Specification 5.6.2, meteorological and environmental impact information is reported in the 2022 Annual Radiological Environmental Operating Report (AREOR) or is retained on file to be provided upon request.
- B. No limits were exceeded during the 2022 reporting period in liquid hold up tanks or waste gas decay tanks as stated in Technical Specification 5.5.12.
- C. There were no irradiated fuel shipments during the 2022 reporting period. An Independent Spent Fuel Storage Installation (ISFSI) campaign began in 2010 when used fuel was removed from the Spent Fuel Pool (SFP), placed into six (6) casks, each containing 32 fuel bundles, and transferred to an outdoor storage pad. No additional casks were placed on the pad in 2011. In 2012, eight (8) additional casks were placed on the pad for a total of fourteen (14) casks. No additional casks were placed on the pad in 2013 or 2014. In 2015, six (6) additional casks were placed on the pad for a total of twenty (20) casks. In 2016, six (6) additional casks were placed on the pad. No additional casks were placed on the pad in 2017. In 2018, five (5) additional casks were placed on the pad. In 2019, six (6) additional cask were placed on the pad. In 2020, no additional cask were added. In 2021, six (6) additional cask were placed on the pad. In 2022, seven (7) additional cask were placed on the pad for a total of fifty (50). Prior to the first ISFSI campaign, additional dosimeters were placed at the site boundary nearest to the storage pad (in between the pad and the nearest resident) for the purpose of measuring any potential offsite dose to the public from the storage pad. Since the dosimeters were placed, data from the dosimeters, when compared to the existing environmental dosimeters in the surrounding area, have shown no statistical difference. As a result, there is currently no offsite dose contribution from the ISFSI facility or any other on-site storage facility, including the Dry Active Waste (DAW) Building and the Old Steam Generator (OSG) Storage Building, as evidenced by dosimetry data that is indistinguishable from the existing environmental dosimeters.
- D. There were no effluent releases or offsite dose calculations that exceeded technical specification or TRM limits during the 2022 reporting period. There were no REMP sample results that exceeded TRM or analytical result investigation levels. Cs-137 was present in the May 2022 sampling of sediment and can be present in local sediment/soil samples as a result of fallout from weapons testing and/or the Chernobyl and Fukushima nuclear accidents and this measured Cs-137 is not attributed to Byron plant effluents. No radionuclides that were a result of plant effluents were detected in any of the other REMP samples
- E. There were no elevated releases during the 2022 reporting period. All planned gaseous releases are considered mixed mode releases and were discharged by way of the plant vent stacks.
- F. There were no unplanned gaseous or liquid releases to unrestricted areas during the 2022 reporting period.
- G. The Rock River flow measurements during liquid effluent discharges were obtained from the U.S. Geological Survey Byron normally but used Dixon from date 1/4/22 to 2/16/22, and Como Gauging Station from 12/20/22 to 12/28/22 for the Rock River, due to frozen river conditions.
- H. In March of 2022 a liquid released was authorized and released. During the creation of the release permit an error was made when manually entering the nuclides from the sample results. After the release new pre- releases and post- releases were made with the corrected nuclides and no dose limits were exceeded.

- I. Attached are offsite dose calculation reports, meteorological data, and LLDs for January through December of 2022.

The following are the maximum annual calculated cumulative offsite doses resulting from Bryon airborne releases in 2022 based on concurrent meteorological data:

Unit 1:

<u>Dose</u>	<u>Maximum Value</u>	<u>Sector Affected</u>
gamma air ⁽¹⁾	3.370 x 10 ⁻⁵ mrad	North-Northwest
beta air ⁽²⁾	1.370 x 10 ⁻⁵ mrad	North-Northwest
whole body ⁽³⁾	7.530 x 10 ⁻² mrem	North-Northwest
skin ⁽⁴⁾	3.650 x 10 ⁻⁵ mrem	North-Northwest
organ ⁽⁵⁾ (child-bone)	3.700 x 10 ⁻¹ mrem	North-Northwest

Unit 1 Compliance Status

10 CFR 50 Appendix I	Yearly Objective		% of Appendix I
gamma air	10.0	mrad	0.00
beta air	20.0	mrad	0.00
whole body	5.0	mrem	1.51
skin	15.0	mrem	0.00
organ	15.0	mrem	2.47

Unit 2:

<u>Dose</u>	<u>Maximum Value</u>	<u>Sector Affected</u>
gamma air ⁽¹⁾	1.340 x 10 ⁻⁵ mrad	North-Northwest
beta air ⁽²⁾	1.080 x 10 ⁻⁵ mrad	North-Northwest
whole body ⁽³⁾	8.170 x 10 ⁻² mrem	North-Northwest
skin ⁽⁴⁾	1.580 x 10 ⁻⁵ mrem	North-Northwest
organ ⁽⁵⁾ (child-bone)	3.820 x 10 ⁻¹ mrem	North-Northwest

Unit 2 Compliance Status

10 CFR 50 Appendix I	Yearly Objective		% of Appendix I
gamma air	10.0	mrad	0.00
beta air	20.0	mrad	0.00
whole body	5.0	mrem	1.53
skin	15.0	mrem	0.00
organ	15.0	mrem	2.55

- ⁽¹⁾ Gamma Air Dose - GASPAR II, NUREG-0597
- ⁽²⁾ Beta Air Dose - GASPAR II, NUREG-0597
- ⁽³⁾ Whole Body Dose - GASPAR II, NUREG-0597
- ⁽⁴⁾ Skin Dose - GASPAR II, NUREG-0597
- ⁽⁵⁾ Inhalation and Food Pathways Dose - GASPAR II, NUREG-0597

Attachment A, 2022 Radioactive Effluent Release Report
2022 Lower Limits of Detection (LLD's)

Nuclide	Gaseous LLD (uCi/cc)	Required Gaseous LLD (uCi/cc)	Nuclide	Liquid LLD (uCi/ml)	Required Liquid LLD (uCi/cc)
H3	4.52E-08	1.00E-07	H3	1.81E-06	1.00E-05
Mn54	4.30E-14	1.00E-11	Mn54	1.13E-08	5.00E-07
Co58	5.08E-14	1.00E-11	Fe55	6.27E-07	1.00E-06
Fe59	8.63E-14	1.00E-11	Co58	1.36E-08	5.00E-07
Co60	6.51E-14	1.00E-11	Fe59	2.52E-08	5.00E-07
Zn65	6.78E-14	1.00E-11	Co60	2.21E-08	5.00E-07
Kr87	2.87E-08	1.00E-04	Zn65	2.02E-08	5.00E-07
Kr88	4.72E-08	1.00E-04	Kr85m	1.44E-08	1.00E-05
Sr89	1.90E-14	1.00E-11	Kr87	2.91E-08	1.00E-05
Sr-90	2.48E-15	1.00E-11	Kr88	4.80E-08	1.00E-05
Mo99	8.22E-14	1.00E-11	Sr89	4.54E-08	5.00E-08
I131	7.29E-14	1.00E-12	Sr90	1.26E-08	5.00E-08
I133	2.86E-13	1.00E-10	Mo99	1.11E-08	5.00E-07
Xe133	2.40E-08	1.00E-04	Xe131m	2.38E-08	1.00E-05
Xe133m	1.00E-07	1.00E-04	I131	1.11E-08	1.00E-06
Cs134	3.21E-14	1.00E-11	Xe133	1.01E-07	1.00E-05
Xe135	1.09E-08	1.00E-04	Xe133m	9.75E-08	1.00E-05
Cs137	4.44E-14	1.00E-11	Cs134	1.13E-08	5.00E-07
Xe138	4.49E-08	1.00E-04	Xe135	1.18E-08	1.00E-05
Ce141	7.39E-14	1.00E-11	Cs137	1.27E-08	5.00E-07
Ce144	2.81E-13	1.00E-11	Xe138	1.01E-07	1.00E-05
Gross Alpha	2.73E-15	1.00E-11	Ce141	1.89E-08	5.00E-07
			Ce144	9.27E-08	5.00E-06
			Gross Alpha	4.98E-08	1.00E-07
			Gross Beta	2.52E-07	

Wind Direction and Stability Class

Byron Generating Station

Period of Record: January - March 2022
 Stability Class - Extremely Unstable - 250Ft-30Ft Delta-T (F)
 Winds Measured at 30 Feet

Wind Direction	Wind Speed (in mph)						Total
	1-3	4-7	8-12	13-18	19-24	> 24	
N	0	0	2	1	0	0	3
NNE	1	0	0	0	0	0	1
NE	0	0	0	0	0	0	0
ENE	0	2	4	0	0	0	6
E	0	3	0	0	0	0	3
ESE	0	3	0	0	0	0	3
SE	0	1	0	0	0	0	1
SSE	0	1	1	0	0	0	2
S	0	1	0	0	0	0	1
SSW	0	0	0	0	0	0	0
SW	0	0	0	0	0	0	0
WSW	0	0	0	0	0	0	0
W	0	5	0	0	0	0	5
WNW	1	2	4	0	0	0	7
NW	0	1	2	0	0	0	3
NNW	0	1	5	0	0	0	6
Variable	0	0	0	0	0	0	0
Total	2	20	18	1	0	0	41

Hours of calm in this stability class: 0
 Hours of missing wind measurements in this stability class: 0
 Hours of missing stability measurements in all stability classes: 4

Byron Generating Station

Period of Record: January - March 2022
 Stability Class - Moderately Unstable - 250Ft-30Ft Delta-T (F)
 Winds Measured at 30 Feet

Wind Direction	Wind Speed (in mph)						Total
	1-3	4-7	8-12	13-18	19-24	> 24	
N	0	0	0	0	0	0	0
NNE	0	0	1	0	0	0	1
NE	0	0	1	0	0	0	1
ENE	0	0	0	0	0	0	0
E	0	0	0	0	0	0	0
ESE	0	0	0	0	0	0	0
SE	0	0	0	0	0	0	0
SSE	0	0	0	0	0	0	0
S	0	0	0	0	0	0	0
SSW	0	0	0	0	0	0	0
SW	0	0	0	0	0	0	0
WSW	0	0	0	0	0	0	0
W	0	0	0	0	0	0	0
WNW	0	1	1	0	0	0	2
NW	0	1	3	0	0	0	4
NNW	0	0	0	0	0	0	0
Variable	0	0	0	0	0	0	0
Total	0	2	6	0	0	0	8

Hours of calm in this stability class: 0
 Hours of missing wind measurements in this stability class: 0
 Hours of missing stability measurements in all stability classes: 4

Byron Generating Station

Period of Record: January - March 2022
 Stability Class - Slightly Unstable - 250Ft-30Ft Delta-T (F)
 Winds Measured at 30 Feet

Wind Direction	Wind Speed (in mph)						Total
	1-3	4-7	8-12	13-18	19-24	> 24	
N	0	0	1	0	0	0	1
NNE	0	0	1	0	0	0	1
NE	0	0	4	0	0	0	4
ENE	0	0	0	0	0	0	0
E	0	0	1	0	0	0	1
ESE	0	0	0	0	0	0	0
SE	0	0	0	0	0	0	0
SSE	0	0	0	0	0	0	0
S	0	0	1	0	0	0	1
SSW	0	0	0	0	0	0	0
SW	0	0	0	0	0	0	0
WSW	0	0	0	0	0	0	0
W	0	1	1	0	0	0	2
WNW	0	0	4	3	0	0	7
NW	0	0	2	4	0	0	6
NNW	0	0	0	0	0	0	0
Variable	0	0	0	0	0	0	0
Total	0	1	15	7	0	0	23

Hours of calm in this stability class: 0
 Hours of missing wind measurements in this stability class: 0
 Hours of missing stability measurements in all stability classes: 4

Byron Generating Station

Period of Record: January - March 2022
 Stability Class - Neutral - 250Ft-30Ft Delta-T (F)
 Winds Measured at 30 Feet

Wind Direction	Wind Speed (in mph)						Total
	1-3	4-7	8-12	13-18	19-24	> 24	
N	0	12	59	81	0	0	152
NNE	2	14	16	5	0	0	37
NE	2	6	26	20	6	0	60
ENE	1	6	13	3	1	0	24
E	1	5	10	0	0	0	16
ESE	1	5	7	19	5	0	37
SE	0	2	3	10	0	0	15
SSE	1	7	24	30	1	0	63
S	1	13	26	17	2	0	59
SSW	1	13	23	14	7	0	58
SW	2	10	43	17	4	0	76
WSW	2	13	19	11	3	0	48
W	4	25	54	39	15	9	146
WNW	2	26	63	52	22	0	165
NW	4	24	97	73	4	0	202
NNW	1	15	76	20	0	0	112
Variable	0	0	0	0	0	0	0
Total	25	196	559	411	70	9	1270

Hours of calm in this stability class: 0
 Hours of missing wind measurements in this stability class: 22
 Hours of missing stability measurements in all stability classes: 4

Byron Generating Station

Period of Record: January - March 2022
 Stability Class - Slightly Stable - 250Ft-30Ft Delta-T (F)
 Winds Measured at 30 Feet

Wind Direction	Wind Speed (in mph)						Total
	1-3	4-7	8-12	13-18	19-24	> 24	
N	3	13	13	0	0	0	29
NNE	0	12	6	1	0	0	19
NE	1	5	5	2	1	0	14
ENE	2	2	2	3	0	0	9
E	3	10	3	0	0	0	16
ESE	1	8	6	7	13	1	36
SE	0	7	17	11	1	0	36
SSE	1	13	18	24	3	0	59
S	2	11	17	19	4	0	53
SSW	8	21	15	8	9	0	61
SW	12	26	15	9	1	0	63
WSW	6	22	22	2	1	4	57
W	1	23	22	4	0	0	50
WNW	6	16	6	0	1	1	30
NW	11	17	4	1	0	0	33
NNW	2	14	5	0	0	0	21
Variable	0	0	0	0	0	0	0
Total	59	220	176	91	34	6	586

Hours of calm in this stability class: 0
 Hours of missing wind measurements in this stability class: 26
 Hours of missing stability measurements in all stability classes: 4

Byron Generating Station

Period of Record: January - March 2022
 Stability Class - Moderately Stable - 250Ft-30Ft Delta-T (F)
 Winds Measured at 30 Feet

Wind Direction	Wind Speed (in mph)						Total
	1-3	4-7	8-12	13-18	19-24	> 24	
N	2	0	1	0	0	0	3
NNE	1	1	0	0	0	0	2
NE	0	1	0	0	0	0	1
ENE	4	1	0	0	0	0	5
E	1	3	0	0	0	0	4
ESE	1	2	1	0	0	0	4
SE	2	2	5	0	0	0	9
SSE	5	11	13	2	0	0	31
S	4	10	0	2	0	0	16
SSW	5	3	0	0	0	0	8
SW	3	4	0	0	0	0	7
WSW	3	2	0	0	0	0	5
W	6	2	0	0	0	0	8
WNW	9	3	0	0	0	0	12
NW	6	2	0	0	0	0	8
NNW	2	1	0	0	0	0	3
Variable	0	0	0	0	0	0	0
Total	54	48	20	4	0	0	126

Hours of calm in this stability class: 0
 Hours of missing wind measurements in this stability class: 5
 Hours of missing stability measurements in all stability classes: 4

Byron Generating Station

Period of Record: January - March 2022
 Stability Class - Extremely Stable - 250Ft-30Ft Delta-T (F)
 Winds Measured at 30 Feet

Wind Direction	Wind Speed (in mph)						Total
	1-3	4-7	8-12	13-18	19-24	> 24	
N	0	0	0	0	0	0	0
NNE	0	0	0	0	0	0	0
NE	1	0	0	0	0	0	1
ENE	0	0	0	0	0	0	0
E	0	1	0	0	0	0	1
ESE	1	1	2	0	0	0	4
SE	0	4	4	0	0	0	8
SSE	1	4	5	0	0	0	10
S	3	4	0	0	0	0	7
SSW	2	1	0	0	0	0	3
SW	1	0	0	0	0	0	1
WSW	3	0	0	0	0	0	3
W	2	0	0	0	0	0	2
WNW	5	0	0	0	0	0	5
NW	3	0	0	0	0	0	3
NNW	0	0	0	0	0	0	0
Variable	0	0	0	0	0	0	0
Total	22	15	11	0	0	0	48

Hours of calm in this stability class: 1
 Hours of missing wind measurements in this stability class: 0
 Hours of missing stability measurements in all stability classes: 4

Byron Generating Station

Period of Record: January - March 2022
 Stability Class - Extremely Unstable - 250Ft-30Ft Delta-T (F)
 Winds Measured at 250 Feet

Wind Direction	Wind Speed (in mph)						Total
	1-3	4-7	8-12	13-18	19-24	> 24	
N	0	0	0	3	0	0	3
NNE	0	0	0	0	0	0	0
NE	0	0	0	0	0	0	0
ENE	0	0	0	1	0	0	1
E	0	1	3	2	0	0	6
ESE	1	2	1	0	0	0	4
SE	0	1	1	0	0	0	2
SSE	0	1	1	0	0	0	2
S	0	1	0	1	0	0	2
SSW	0	0	0	0	0	0	0
SW	0	0	0	0	0	0	0
WSW	0	0	0	0	0	0	0
W	1	4	0	0	0	0	5
WNW	0	1	6	1	0	0	8
NW	0	0	2	1	0	0	3
NNW	0	1	0	4	0	0	5
Variable	0	0	0	0	0	0	0
Total	2	12	14	13	0	0	41

Hours of calm in this stability class: 0
 Hours of missing wind measurements in this stability class: 0
 Hours of missing stability measurements in all stability classes: 4

Byron Generating Station

Period of Record: January - March 2022
 Stability Class - Moderately Unstable - 250Ft-30Ft Delta-T (F)
 Winds Measured at 250 Feet

Wind Direction	Wind Speed (in mph)						Total
	1-3	4-7	8-12	13-18	19-24	> 24	
N	0	0	0	0	0	0	0
NNE	0	0	0	0	0	0	0
NE	0	0	0	1	1	0	2
ENE	0	0	0	0	0	0	0
E	0	0	0	0	0	0	0
ESE	0	0	0	0	0	0	0
SE	0	0	0	0	0	0	0
SSE	0	0	0	0	0	0	0
S	0	0	0	0	0	0	0
SSW	0	0	0	0	0	0	0
SW	0	0	0	0	0	0	0
WSW	0	0	0	0	0	0	0
W	0	0	0	0	0	0	0
WNW	0	0	1	1	0	0	2
NW	0	1	0	3	0	0	4
NNW	0	0	0	0	0	0	0
Variable	0	0	0	0	0	0	0
Total	0	1	1	5	1	0	8

Hours of calm in this stability class: 0
 Hours of missing wind measurements in this stability class: 0
 Hours of missing stability measurements in all stability classes: 4

Byron Generating Station

Period of Record: January - March 2022
 Stability Class - Slightly Unstable - 250Ft-30Ft Delta-T (F)
 Winds Measured at 250 Feet

Wind Direction	Wind Speed (in mph)						Total
	1-3	4-7	8-12	13-18	19-24	> 24	
N	0	0	0	1	0	0	1
NNE	0	0	0	1	0	0	1
NE	0	0	0	4	0	0	4
ENE	0	0	0	0	0	0	0
E	0	0	0	1	0	0	1
ESE	0	0	0	0	0	0	0
SE	0	0	0	0	0	0	0
SSE	0	0	0	0	0	0	0
S	0	0	1	0	0	0	1
SSW	0	0	0	0	0	0	0
SW	0	0	0	0	0	0	0
WSW	0	0	0	0	0	0	0
W	0	0	2	1	0	0	3
WNW	0	0	0	9	0	0	9
NW	0	0	0	3	0	0	3
NNW	0	0	0	0	0	0	0
Variable	0	0	0	0	0	0	0
Total	0	0	3	20	0	0	23

Hours of calm in this stability class: 0
 Hours of missing wind measurements in this stability class: 0
 Hours of missing stability measurements in all stability classes: 4

Byron Generating Station

Period of Record: January - March 2022
 Stability Class - Neutral - 250Ft-30Ft Delta-T (F)
 Winds Measured at 250 Feet

Wind Direction	Wind Speed (in mph)						Total
	1-3	4-7	8-12	13-18	19-24	> 24	
N	1	7	17	63	53	1	142
NNE	1	9	17	11	10	1	49
NE	0	5	6	19	13	8	51
ENE	2	5	2	17	2	1	29
E	0	2	3	13	1	0	19
ESE	2	1	3	12	12	6	36
SE	0	1	0	3	7	1	12
SSE	1	2	5	15	20	4	47
S	1	0	27	26	18	2	74
SSW	0	7	18	24	15	13	77
SW	0	7	21	29	14	4	75
WSW	0	11	11	23	6	3	54
W	1	10	33	43	30	21	138
WNW	2	11	71	62	33	17	196
NW	1	13	64	81	26	2	187
NNW	1	11	38	51	5	0	106
Variable	0	0	0	0	0	0	0
Total	13	102	336	492	265	84	1292

Hours of calm in this stability class: 0
 Hours of missing wind measurements in this stability class: 0
 Hours of missing stability measurements in all stability classes: 4

Byron Generating Station

Period of Record: January - March 2022
 Stability Class - Slightly Stable - 250Ft-30Ft Delta-T (F)
 Winds Measured at 250 Feet

Wind Direction	Wind Speed (in mph)						Total
	1-3	4-7	8-12	13-18	19-24	> 24	
N	1	3	4	6	0	0	14
NNE	2	4	4	15	0	0	25
NE	1	4	9	5	2	1	22
ENE	1	1	4	5	2	0	13
E	1	7	5	0	4	0	17
ESE	0	2	5	4	4	18	33
SE	0	0	4	8	8	10	30
SSE	0	0	2	16	11	16	45
S	0	4	4	14	23	16	61
SSW	0	2	7	23	17	15	64
SW	0	6	22	19	14	6	67
WSW	1	2	29	23	5	5	65
W	1	7	24	24	4	0	60
WNW	1	4	15	4	0	2	26
NW	0	3	19	24	1	0	47
NNW	1	4	15	3	0	0	23
Variable	0	0	0	0	0	0	0
Total	10	53	172	193	95	89	612

Hours of calm in this stability class: 0
 Hours of missing wind measurements in this stability class: 0
 Hours of missing stability measurements in all stability classes: 4

Byron Generating Station

Period of Record: January - March 2022
 Stability Class - Moderately Stable - 250Ft-30Ft Delta-T (F)
 Winds Measured at 250 Feet

Wind Direction	Wind Speed (in mph)						Total
	1-3	4-7	8-12	13-18	19-24	> 24	
N	1	2	1	0	0	0	4
NNE	0	2	0	0	1	0	3
NE	0	5	2	0	0	0	7
ENE	2	2	0	1	0	0	5
E	2	2	1	0	0	0	5
ESE	0	1	2	1	0	0	4
SE	0	2	1	1	3	0	7
SSE	0	0	1	1	9	0	11
S	0	0	2	9	5	3	19
SSW	0	2	5	7	2	0	16
SW	1	2	2	3	0	0	8
WSW	0	1	7	0	0	0	8
W	0	1	8	1	0	0	10
WNW	0	4	8	3	0	0	15
NW	0	0	3	4	0	0	7
NNW	0	2	0	0	0	0	2
Variable	0	0	0	0	0	0	0
Total	6	28	43	31	20	3	131

Hours of calm in this stability class: 0
 Hours of missing wind measurements in this stability class: 0
 Hours of missing stability measurements in all stability classes: 4

Byron Generating Station

Period of Record: January - March 2022
 Stability Class - Extremely Stable - 250Ft-30Ft Delta-T (F)
 Winds Measured at 250 Feet

Wind Direction	Wind Speed (in mph)						Total
	1-3	4-7	8-12	13-18	19-24	> 24	
N	0	0	0	0	0	0	0
NNE	0	0	0	0	0	0	0
NE	0	1	0	0	0	0	1
ENE	1	0	0	0	0	0	1
E	2	0	0	0	0	0	2
ESE	0	1	0	1	0	0	2
SE	0	3	1	1	0	0	5
SSE	1	1	4	4	3	0	13
S	0	2	3	3	5	0	13
SSW	0	1	1	0	0	0	2
SW	1	0	1	0	0	0	2
WSW	0	0	2	0	0	0	2
W	0	1	0	0	0	0	1
WNW	0	0	0	3	0	0	3
NW	0	1	1	0	0	0	2
NNW	0	0	0	0	0	0	0
Variable	0	0	0	0	0	0	0
Total	5	11	13	12	8	0	49

Hours of calm in this stability class: 0
 Hours of missing wind measurements in this stability class: 0
 Hours of missing stability measurements in all stability classes: 4

Byron Generating Station

Period of Record: April - June 2022
 Stability Class - Extremely Unstable - 250Ft-30Ft Delta-T (F)
 Winds Measured at 30 Feet

Wind Direction	Wind Speed (in mph)						Total
	1-3	4-7	8-12	13-18	19-24	> 24	
N	0	0	1	0	0	0	1
NNE	0	0	2	0	0	0	2
NE	0	0	0	0	0	0	0
ENE	0	0	0	0	0	0	0
E	0	0	1	0	0	0	1
ESE	0	0	3	0	0	0	3
SE	0	0	0	0	0	0	0
SSE	0	0	0	1	0	0	1
S	0	3	4	2	0	0	9
SSW	0	3	2	1	0	0	6
SW	0	3	2	0	0	0	5
WSW	2	0	1	0	0	0	3
W	1	0	1	0	0	0	2
WNW	0	0	0	2	0	0	2
NW	0	0	0	0	0	0	0
NNW	0	1	1	0	0	0	2
Variable	0	0	0	0	0	0	0
Total	3	10	18	6	0	0	37

Hours of calm in this stability class: 0
 Hours of missing wind measurements in this stability class: 0
 Hours of missing stability measurements in all stability classes: 3

Byron Generating Station

Period of Record: April - June 2022

Stability Class - Moderately Unstable - 250Ft-30Ft Delta-T (F)

Winds Measured at 30 Feet

Wind Direction	Wind Speed (in mph)						Total
	1-3	4-7	8-12	13-18	19-24	> 24	
N	0	0	1	0	0	0	1
NNE	0	0	0	3	0	0	3
NE	0	0	0	1	0	0	1
ENE	0	0	3	1	0	0	4
E	0	0	1	0	0	0	1
ESE	0	0	1	0	0	0	1
SE	0	0	0	0	0	0	0
SSE	0	0	0	1	0	0	1
S	0	1	0	1	0	0	2
SSW	0	0	0	0	0	0	0
SW	0	0	3	1	0	0	4
WSW	0	0	0	0	0	0	0
W	0	0	0	0	0	0	0
WNW	0	0	0	2	0	0	2
NW	0	0	4	1	0	0	5
NNW	0	1	0	0	0	0	1
Variable	0	0	0	0	0	0	0
Total	0	2	13	11	0	0	26

Hours of calm in this stability class: 0

Hours of missing wind measurements in this stability class: 0

Hours of missing stability measurements in all stability classes: 3

Byron Generating Station

Period of Record: April - June 2022
 Stability Class - Slightly Unstable - 250Ft-30Ft Delta-T (F)
 Winds Measured at 30 Feet

Wind Direction	Wind Speed (in mph)						Total
	1-3	4-7	8-12	13-18	19-24	> 24	
N	1	1	2	0	0	0	4
NNE	0	0	0	2	0	0	2
NE	1	0	0	0	0	0	1
ENE	0	1	0	1	0	0	2
E	0	3	3	0	0	0	6
ESE	0	1	0	0	0	0	1
SE	0	0	0	0	0	1	1
SSE	0	0	0	0	0	0	0
S	0	1	1	0	0	0	2
SSW	0	4	5	2	0	0	11
SW	0	1	6	1	0	0	8
WSW	0	0	0	0	0	0	0
W	1	0	0	0	0	0	1
WNW	0	1	2	7	0	0	10
NW	0	1	10	1	0	0	12
NNW	0	0	1	0	0	0	1
Variable	0	0	0	0	0	0	0
Total	3	14	30	14	0	1	62

Hours of calm in this stability class: 0
 Hours of missing wind measurements in this stability class: 0
 Hours of missing stability measurements in all stability classes: 3

Byron Generating Station

Period of Record: April - June 2022
 Stability Class - Neutral - 250Ft-30Ft Delta-T (F)
 Winds Measured at 30 Feet

Wind Direction	Wind Speed (in mph)						Total
	1-3	4-7	8-12	13-18	19-24	> 24	
N	2	20	13	4	0	0	39
NNE	4	9	11	6	0	0	30
NE	2	7	6	2	0	0	17
ENE	1	13	15	4	0	0	33
E	0	40	53	2	0	0	95
ESE	3	6	11	14	2	0	36
SE	0	6	11	31	16	4	68
SSE	0	1	19	13	17	6	56
S	1	18	24	37	12	0	92
SSW	2	20	34	18	2	0	76
SW	1	16	25	13	1	0	56
WSW	4	18	12	34	9	7	84
W	3	15	26	27	5	0	76
WNW	1	13	41	46	3	0	104
NW	1	20	85	19	1	0	126
NNW	2	17	20	6	0	0	45
Variable	0	0	0	0	0	0	0
Total	27	239	406	276	68	17	1033

Hours of calm in this stability class: 0
 Hours of missing wind measurements in this stability class: 0
 Hours of missing stability measurements in all stability classes: 3

Byron Generating Station

Period of Record: April - June 2022
 Stability Class - Slightly Stable - 250Ft-30Ft Delta-T (F)
 Winds Measured at 30 Feet

Wind Direction	Wind Speed (in mph)						Total
	1-3	4-7	8-12	13-18	19-24	> 24	
N	1	25	3	0	0	0	29
NNE	1	7	5	0	0	0	13
NE	2	9	12	1	0	0	24
ENE	1	12	16	6	0	0	35
E	3	40	23	5	0	0	71
ESE	4	14	25	8	5	0	56
SE	1	9	13	22	4	0	49
SSE	2	27	38	16	6	0	89
S	9	22	27	26	6	0	90
SSW	3	19	23	5	0	0	50
SW	3	12	23	4	0	0	42
WSW	5	15	18	4	1	0	43
W	4	13	16	4	4	2	43
WNW	6	21	17	0	0	0	44
NW	2	32	15	1	0	0	50
NNW	2	10	9	0	0	0	21
Variable	0	0	0	0	0	0	0
Total	49	287	283	102	26	2	749

Hours of calm in this stability class: 2
 Hours of missing wind measurements in this stability class: 0
 Hours of missing stability measurements in all stability classes: 3

Byron Generating Station

Period of Record: April - June 2022
 Stability Class - Moderately Stable - 250Ft-30Ft Delta-T (F)
 Winds Measured at 30 Feet

Wind Direction	Wind Speed (in mph)						Total
	1-3	4-7	8-12	13-18	19-24	> 24	
N	0	9	0	0	0	0	9
NNE	0	1	0	0	0	0	1
NE	6	1	2	0	0	0	9
ENE	1	2	2	0	0	0	5
E	2	9	1	0	0	0	12
ESE	1	8	7	0	0	0	16
SE	0	2	4	0	0	0	6
SSE	4	15	10	0	0	0	29
S	7	21	4	0	0	0	32
SSW	7	9	1	0	0	0	17
SW	6	6	0	0	0	0	12
WSW	1	3	0	0	0	0	4
W	6	3	0	0	0	0	9
WNW	6	3	0	0	0	0	9
NW	11	5	1	0	0	0	17
NNW	2	7	0	0	0	0	9
Variable	0	0	0	0	0	0	0
Total	60	104	32	0	0	0	196

Hours of calm in this stability class: 0
 Hours of missing wind measurements in this stability class: 0
 Hours of missing stability measurements in all stability classes: 3

Byron Generating Station

Period of Record: April - June 2022
 Stability Class - Extremely Stable - 250Ft-30Ft Delta-T (F)
 Winds Measured at 30 Feet

Wind Direction	Wind Speed (in mph)						Total
	1-3	4-7	8-12	13-18	19-24	> 24	
N	3	1	0	0	0	0	4
NNE	0	0	0	0	0	0	0
NE	0	0	0	0	0	0	0
ENE	1	1	0	0	0	0	2
E	0	3	0	0	0	0	3
ESE	1	0	6	0	0	0	7
SE	1	8	2	0	0	0	11
SSE	4	2	2	0	0	0	8
S	7	9	1	0	0	0	17
SSW	2	2	0	0	0	0	4
SW	3	0	0	0	0	0	3
WSW	1	0	0	0	0	0	1
W	3	0	0	0	0	0	3
WNW	4	1	0	0	0	0	5
NW	5	0	0	0	0	0	5
NNW	1	1	0	0	0	0	2
Variable	0	0	0	0	0	0	0
Total	36	28	11	0	0	0	75

Hours of calm in this stability class: 1
 Hours of missing wind measurements in this stability class: 0
 Hours of missing stability measurements in all stability classes: 3

Byron Generating Station

Period of Record: April - June 2022
 Stability Class - Extremely Unstable - 250Ft-30Ft Delta-T (F)
 Winds Measured at 250 Feet

Wind Direction	Wind Speed (in mph)						Total
	1-3	4-7	8-12	13-18	19-24	> 24	
N	0	0	0	0	0	0	0
NNE	0	0	0	3	0	0	3
NE	0	0	0	0	0	0	0
ENE	0	0	0	0	0	0	0
E	0	0	0	1	0	0	1
ESE	0	0	0	1	0	0	1
SE	0	0	0	2	0	0	2
SSE	0	0	0	0	1	0	1
S	0	0	1	2	2	0	5
SSW	0	4	1	3	1	0	9
SW	0	2	2	0	1	0	5
WSW	1	1	1	0	1	0	4
W	0	0	0	1	1	0	2
WNW	1	0	0	0	1	0	2
NW	0	0	0	0	0	0	0
NNW	0	0	1	1	0	0	2
Variable	0	0	0	0	0	0	0
Total	2	7	6	14	8	0	37

Hours of calm in this stability class: 0
 Hours of missing wind measurements in this stability class: 0
 Hours of missing stability measurements in all stability classes: 3

Byron Generating Station

Period of Record: April - June 2022
 Stability Class - Moderately Unstable - 250Ft-30Ft Delta-T (F)
 Winds Measured at 250 Feet

Wind Direction	Wind Speed (in mph)						Total
	1-3	4-7	8-12	13-18	19-24	> 24	
N	0	0	0	0	0	0	0
NNE	0	0	0	1	3	0	4
NE	0	0	0	0	1	0	1
ENE	0	0	0	1	0	0	1
E	0	0	2	2	0	0	4
ESE	0	0	0	0	0	0	0
SE	0	0	0	1	0	0	1
SSE	0	0	0	0	0	1	1
S	0	0	0	1	1	0	2
SSW	0	0	0	0	0	0	0
SW	0	0	0	3	1	0	4
WSW	0	0	0	0	0	0	0
W	0	0	0	0	0	0	0
WNW	0	0	0	0	2	0	2
NW	0	0	1	3	1	0	5
NNW	0	0	1	0	0	0	1
Variable	0	0	0	0	0	0	0
Total	0	0	4	12	9	1	26

Hours of calm in this stability class: 0
 Hours of missing wind measurements in this stability class: 0
 Hours of missing stability measurements in all stability classes: 3

Byron Generating Station

Period of Record: April - June 2022
 Stability Class - Slightly Unstable - 250Ft-30Ft Delta-T (F)
 Winds Measured at 250 Feet

Wind Direction	Wind Speed (in mph)						Total
	1-3	4-7	8-12	13-18	19-24	> 24	
N	0	0	2	1	0	0	3
NNE	0	1	0	0	1	0	2
NE	1	0	0	0	1	0	2
ENE	0	0	2	0	1	0	3
E	0	0	5	0	0	0	5
ESE	0	0	1	0	0	0	1
SE	0	0	0	0	0	1	1
SSE	0	0	0	0	0	0	0
S	0	0	2	0	0	0	2
SSW	0	0	6	1	2	0	9
SW	0	0	5	4	1	0	10
WSW	0	0	0	0	0	0	0
W	0	0	1	0	0	0	1
WNW	0	1	1	5	5	0	12
NW	0	0	2	8	0	0	10
NNW	0	0	1	0	0	0	1
Variable	0	0	0	0	0	0	0
Total	1	2	28	19	11	1	62

Hours of calm in this stability class: 0
 Hours of missing wind measurements in this stability class: 0
 Hours of missing stability measurements in all stability classes: 3

Byron Generating Station

Period of Record: April - June 2022
 Stability Class - Neutral - 250Ft-30Ft Delta-T (F)
 Winds Measured at 250 Feet

Wind Direction	Wind Speed (in mph)						Total
	1-3	4-7	8-12	13-18	19-24	> 24	
N	2	16	11	6	1	0	36
NNE	2	7	5	13	5	0	32
NE	2	2	6	3	3	0	16
ENE	2	3	11	5	6	0	27
E	0	11	63	29	5	2	110
ESE	1	6	7	6	12	4	36
SE	1	3	1	12	16	28	61
SSE	2	1	8	11	9	24	55
S	1	7	24	22	26	12	92
SSW	1	9	23	29	12	2	76
SW	1	10	13	21	14	6	65
WSW	4	7	16	14	33	12	86
W	1	10	13	31	20	2	77
WNW	1	12	24	36	36	0	109
NW	0	8	49	50	6	0	113
NNW	0	7	20	15	0	0	42
Variable	0	0	0	0	0	0	0
Total	21	119	294	303	204	92	1033

Hours of calm in this stability class: 0
 Hours of missing wind measurements in this stability class: 0
 Hours of missing stability measurements in all stability classes: 3

Byron Generating Station

Period of Record: April - June 2022
 Stability Class - Slightly Stable - 250Ft-30Ft Delta-T (F)
 Winds Measured at 250 Feet

Wind Direction	Wind Speed (in mph)						Total
	1-3	4-7	8-12	13-18	19-24	> 24	
N	2	3	7	5	0	0	17
NNE	0	0	5	23	0	0	28
NE	0	2	10	3	2	0	17
ENE	4	5	10	12	4	1	36
E	0	4	24	36	9	3	76
ESE	2	1	8	14	15	13	53
SE	0	2	5	10	10	19	46
SSE	0	4	5	14	33	12	68
S	0	1	13	34	24	18	90
SSW	0	10	14	27	17	1	69
SW	0	1	10	30	13	0	54
WSW	1	1	9	18	6	4	39
W	0	0	12	18	2	3	35
WNW	0	9	15	18	0	0	42
NW	1	3	22	29	1	0	56
NNW	1	2	13	9	0	0	25
Variable	0	0	0	0	0	0	0
Total	11	48	182	300	136	74	751

Hours of calm in this stability class: 0
 Hours of missing wind measurements in this stability class: 0
 Hours of missing stability measurements in all stability classes: 3

Byron Generating Station

Period of Record: April - June 2022
 Stability Class - Moderately Stable - 250Ft-30Ft Delta-T (F)
 Winds Measured at 250 Feet

Wind Direction	Wind Speed (in mph)						Total
	1-3	4-7	8-12	13-18	19-24	> 24	
N	0	1	2	3	0	0	6
NNE	1	2	1	5	0	0	9
NE	0	2	3	2	0	0	7
ENE	0	2	1	2	0	0	5
E	0	3	3	2	2	0	10
ESE	0	1	2	4	6	1	14
SE	0	0	0	3	3	1	7
SSE	0	1	0	3	4	0	8
S	2	4	4	9	8	2	29
SSW	0	4	6	16	5	0	31
SW	0	1	7	6	0	0	14
WSW	0	3	4	2	0	0	9
W	0	4	3	4	0	0	11
WNW	0	0	1	3	0	0	4
NW	1	7	8	9	0	0	25
NNW	0	0	5	2	0	0	7
Variable	0	0	0	0	0	0	0
Total	4	35	50	75	28	4	196

Hours of calm in this stability class: 0
 Hours of missing wind measurements in this stability class: 0
 Hours of missing stability measurements in all stability classes: 3

Byron Generating Station

Period of Record: April - June 2022
 Stability Class - Extremely Stable - 250Ft-30Ft Delta-T (F)
 Winds Measured at 250 Feet

Wind Direction	Wind Speed (in mph)						Total
	1-3	4-7	8-12	13-18	19-24	> 24	
N	0	0	0	2	0	0	2
NNE	0	0	1	3	0	0	4
NE	0	1	1	1	0	0	3
ENE	1	4	0	1	0	0	6
E	1	2	2	0	0	0	5
ESE	0	1	0	0	0	0	1
SE	1	2	3	3	3	0	12
SSE	0	1	4	4	1	0	10
S	0	2	2	3	0	0	7
SSW	0	1	1	1	1	0	4
SW	0	1	4	4	0	0	9
WSW	1	0	2	1	0	0	4
W	0	0	0	0	0	0	0
WNW	0	0	0	3	0	0	3
NW	2	1	0	2	0	0	5
NNW	1	0	0	0	0	0	1
Variable	0	0	0	0	0	0	0
Total	7	16	20	28	5	0	76

Hours of calm in this stability class: 0
 Hours of missing wind measurements in this stability class: 0
 Hours of missing stability measurements in all stability classes: 3

Byron Generating Station

Period of Record: July - September 2022
 Stability Class - Extremely Unstable - 250Ft-30Ft Delta-T (F)
 Winds Measured at 30 Feet

Wind Direction	Wind Speed (in mph)						Total
	1-3	4-7	8-12	13-18	19-24	> 24	
N	0	1	5	0	0	0	6
NNE	1	2	0	0	0	0	3
NE	1	0	1	0	0	0	2
ENE	0	3	0	0	0	0	3
E	0	2	0	0	0	0	2
ESE	0	0	1	0	0	0	1
SE	0	2	0	0	0	0	2
SSE	0	3	1	0	0	0	4
S	0	4	4	0	0	0	8
SSW	0	4	3	0	0	0	7
SW	0	2	0	0	0	0	2
WSW	0	3	1	0	0	0	4
W	0	0	0	0	0	0	0
WNW	1	0	0	0	0	0	1
NW	0	0	4	0	0	0	4
NNW	0	0	1	0	0	0	1
Variable	0	0	0	0	0	0	0
Total	3	26	21	0	0	0	50

Hours of calm in this stability class: 0
 Hours of missing wind measurements in this stability class: 0
 Hours of missing stability measurements in all stability classes: 3

Byron Generating Station

Period of Record: July - September 2022
 Stability Class - Moderately Unstable - 250Ft-30Ft Delta-T (F)
 Winds Measured at 30 Feet

Wind Direction	Wind Speed (in mph)						Total
	1-3	4-7	8-12	13-18	19-24	> 24	
N	0	1	2	1	0	0	4
NNE	0	0	0	0	0	0	0
NE	0	0	0	0	0	0	0
ENE	0	0	1	0	0	0	1
E	0	2	0	0	0	0	2
ESE	0	0	0	0	0	0	0
SE	0	0	0	0	0	0	0
SSE	0	0	1	0	0	0	1
S	0	0	2	0	0	0	2
SSW	0	1	1	0	0	0	2
SW	0	0	0	0	0	0	0
WSW	0	0	0	0	0	0	0
W	0	0	0	0	0	0	0
WNW	0	0	0	0	0	0	0
NW	0	0	0	3	0	0	3
NNW	0	0	4	0	0	0	4
Variable	0	0	0	0	0	0	0
Total	0	4	11	4	0	0	19

Hours of calm in this stability class: 0
 Hours of missing wind measurements in this stability class: 0
 Hours of missing stability measurements in all stability classes: 3

Byron Generating Station

Period of Record: July - September 2022
 Stability Class - Slightly Unstable - 250Ft-30Ft Delta-T (F)
 Winds Measured at 30 Feet

Wind Direction	Wind Speed (in mph)						Total
	1-3	4-7	8-12	13-18	19-24	> 24	
N	0	2	4	0	0	0	6
NNE	1	3	0	0	0	0	4
NE	0	0	1	0	0	0	1
ENE	0	1	2	0	0	0	3
E	0	1	1	0	0	0	2
ESE	0	2	0	0	0	0	2
SE	0	2	0	0	0	0	2
SSE	0	2	3	1	0	0	6
S	0	1	9	2	0	0	12
SSW	0	1	10	0	0	0	11
SW	0	1	0	0	0	0	1
WSW	0	0	0	0	0	0	0
W	0	1	0	0	0	0	1
WNW	0	1	0	0	0	0	1
NW	0	0	0	2	0	0	2
NNW	0	0	2	1	0	0	3
Variable	0	0	0	0	0	0	0
Total	1	18	32	6	0	0	57

Hours of calm in this stability class: 0
 Hours of missing wind measurements in this stability class: 0
 Hours of missing stability measurements in all stability classes: 3

Byron Generating Station

Period of Record: July - September 2022
 Stability Class - Neutral - 250Ft-30Ft Delta-T (F)
 Winds Measured at 30 Feet

Wind Direction	Wind Speed (in mph)						Total
	1-3	4-7	8-12	13-18	19-24	> 24	
N	10	35	36	0	0	0	81
NNE	7	42	12	0	0	0	61
NE	6	22	12	0	0	0	40
ENE	5	37	10	0	0	0	52
E	8	27	0	0	0	0	35
ESE	1	18	6	0	0	0	25
SE	1	12	13	1	0	0	27
SSE	3	35	23	1	0	0	62
S	2	43	46	7	0	0	98
SSW	2	29	34	0	0	0	65
SW	4	32	10	0	0	0	46
WSW	7	24	11	2	0	0	44
W	6	20	26	6	0	0	58
WNW	2	15	58	7	0	0	82
NW	3	45	36	8	0	0	92
NNW	6	28	20	2	0	0	56
Variable	0	0	0	0	0	0	0
Total	73	464	353	34	0	0	924

Hours of calm in this stability class: 0
 Hours of missing wind measurements in this stability class: 0
 Hours of missing stability measurements in all stability classes: 3

Byron Generating Station

Period of Record: July - September 2022
 Stability Class - Slightly Stable - 250Ft-30Ft Delta-T (F)
 Winds Measured at 30 Feet

Wind Direction	Wind Speed (in mph)						Total
	1-3	4-7	8-12	13-18	19-24	> 24	
N	6	15	4	1	0	0	26
NNE	3	24	3	0	0	0	30
NE	7	12	5	0	0	0	24
ENE	6	14	0	0	0	0	20
E	5	22	0	0	0	0	27
ESE	6	12	2	0	0	0	20
SE	4	24	5	0	0	0	33
SSE	2	47	15	0	0	0	64
S	8	49	36	2	0	0	95
SSW	10	16	23	3	0	0	52
SW	8	13	13	0	0	0	34
WSW	10	7	6	2	0	0	25
W	7	24	10	0	0	0	41
WNW	12	31	16	0	0	0	59
NW	11	20	10	0	0	0	41
NNW	5	18	3	0	0	0	26
Variable	0	0	0	0	0	0	0
Total	110	348	151	8	0	0	617

Hours of calm in this stability class: 0
 Hours of missing wind measurements in this stability class: 0
 Hours of missing stability measurements in all stability classes: 3

Byron Generating Station

Period of Record: July - September 2022
 Stability Class - Moderately Stable - 250Ft-30Ft Delta-T (F)
 Winds Measured at 30 Feet

Wind Direction	Wind Speed (in mph)						Total
	1-3	4-7	8-12	13-18	19-24	> 24	
N	2	6	0	0	0	0	8
NNE	5	2	1	0	0	0	8
NE	1	2	0	0	0	0	3
ENE	7	10	0	0	0	0	17
E	5	26	0	0	0	0	31
ESE	4	13	0	0	0	0	17
SE	2	26	1	0	0	0	29
SSE	4	52	5	0	0	0	61
S	14	16	1	0	0	0	31
SSW	10	4	1	0	0	0	15
SW	18	0	1	0	0	0	19
WSW	8	4	0	0	0	0	12
W	17	11	0	0	0	0	28
WNW	16	8	0	0	0	0	24
NW	20	8	0	0	0	0	28
NNW	5	9	0	0	0	0	14
Variable	0	0	0	0	0	0	0
Total	138	197	10	0	0	0	345

Hours of calm in this stability class: 4
 Hours of missing wind measurements in this stability class: 0
 Hours of missing stability measurements in all stability classes: 3

Byron Generating Station

Period of Record: July - September 2022
 Stability Class - Extremely Stable - 250Ft-30Ft Delta-T (F)
 Winds Measured at 30 Feet

Wind Direction	Wind Speed (in mph)						Total
	1-3	4-7	8-12	13-18	19-24	> 24	
N	1	0	0	0	0	0	1
NNE	1	0	0	0	0	0	1
NE	1	0	0	0	0	0	1
ENE	1	0	0	0	0	0	1
E	5	2	0	0	0	0	7
ESE	6	8	0	0	0	0	14
SE	2	7	3	0	0	0	12
SSE	12	16	0	0	0	0	28
S	9	2	0	0	0	0	11
SSW	11	0	0	0	0	0	11
SW	6	0	0	0	0	0	6
WSW	19	0	0	0	0	0	19
W	14	0	0	0	0	0	14
WNW	25	0	0	0	0	0	25
NW	17	1	0	0	0	0	18
NNW	5	0	0	0	0	0	5
Variable	0	0	0	0	0	0	0
Total	135	36	3	0	0	0	174

Hours of calm in this stability class: 15
 Hours of missing wind measurements in this stability class: 0
 Hours of missing stability measurements in all stability classes: 3

Byron Generating Station

Period of Record: July - September 2022
 Stability Class - Extremely Unstable - 250Ft-30Ft Delta-T (F)
 Winds Measured at 250 Feet

Wind Direction	Wind Speed (in mph)						Total
	1-3	4-7	8-12	13-18	19-24	> 24	
N	0	0	4	1	0	0	5
NNE	0	0	1	1	0	0	2
NE	1	2	0	0	0	0	3
ENE	0	2	1	2	0	0	5
E	0	0	1	0	0	0	1
ESE	0	0	0	1	0	0	1
SE	0	0	1	0	0	0	1
SSE	0	3	1	0	0	0	4
S	0	0	2	4	1	0	7
SSW	0	1	5	3	0	0	9
SW	0	0	1	1	0	0	2
WSW	0	1	2	1	0	0	4
W	0	0	0	0	0	0	0
WNW	0	0	0	0	0	0	0
NW	0	1	0	4	0	0	5
NNW	0	0	0	1	0	0	1
Variable	0	0	0	0	0	0	0
Total	1	10	19	19	1	0	50

Hours of calm in this stability class: 0
 Hours of missing wind measurements in this stability class: 0
 Hours of missing stability measurements in all stability classes: 3

Byron Generating Station

Period of Record: July - September 2022
 Stability Class - Moderately Unstable - 250Ft-30Ft Delta-T (F)
 Winds Measured at 250 Feet

Wind Direction	Wind Speed (in mph)						Total
	1-3	4-7	8-12	13-18	19-24	> 24	
N	0	0	1	2	1	0	4
NNE	0	0	0	0	1	0	1
NE	0	0	0	0	0	0	0
ENE	0	0	1	0	0	0	1
E	0	0	2	0	0	0	2
ESE	0	0	0	0	0	0	0
SE	0	0	0	0	0	0	0
SSE	0	0	1	0	0	0	1
S	0	0	0	2	0	0	2
SSW	0	0	0	2	0	0	2
SW	0	0	0	0	0	0	0
WSW	0	0	0	0	0	0	0
W	0	0	0	0	0	0	0
WNW	0	0	0	0	0	0	0
NW	0	0	0	2	2	0	4
NNW	0	0	1	1	0	0	2
Variable	0	0	0	0	0	0	0
Total	0	0	6	9	4	0	19

Hours of calm in this stability class: 0
 Hours of missing wind measurements in this stability class: 0
 Hours of missing stability measurements in all stability classes: 3

Byron Generating Station

Period of Record: July - September 2022
 Stability Class - Slightly Unstable - 250Ft-30Ft Delta-T (F)
 Winds Measured at 250 Feet

Wind Direction	Wind Speed (in mph)						Total
	1-3	4-7	8-12	13-18	19-24	> 24	
N	0	0	4	2	0	0	6
NNE	0	0	3	0	0	0	3
NE	0	0	1	1	0	0	2
ENE	0	0	0	2	0	0	2
E	1	1	1	1	0	0	4
ESE	0	3	0	0	0	0	3
SE	0	0	1	0	0	0	1
SSE	0	1	1	3	1	0	6
S	0	0	6	3	1	0	10
SSW	0	0	5	8	0	0	13
SW	0	0	1	0	0	0	1
WSW	0	0	1	0	0	0	1
W	0	0	0	0	0	0	0
WNW	0	1	0	0	0	0	1
NW	0	0	0	0	2	0	2
NNW	0	0	1	0	1	0	2
Variable	0	0	0	0	0	0	0
Total	1	6	25	20	5	0	57

Hours of calm in this stability class: 0
 Hours of missing wind measurements in this stability class: 0
 Hours of missing stability measurements in all stability classes: 3

Byron Generating Station

Period of Record: July - September 2022
 Stability Class - Neutral - 250Ft-30Ft Delta-T (F)
 Winds Measured at 250 Feet

Wind Direction	Wind Speed (in mph)						Total
	1-3	4-7	8-12	13-18	19-24	> 24	
N	1	12	33	19	0	0	65
NNE	1	23	33	12	1	0	70
NE	0	16	24	11	0	0	51
ENE	0	20	28	9	0	0	57
E	6	15	14	1	0	0	36
ESE	2	9	9	3	0	0	23
SE	0	6	12	7	2	0	27
SSE	2	11	29	13	3	0	58
S	1	14	40	31	8	1	95
SSW	3	19	28	24	2	0	76
SW	4	22	17	10	0	0	53
WSW	1	10	18	7	3	0	39
W	4	4	22	14	7	0	51
WNW	0	5	30	39	8	0	82
NW	2	23	32	32	6	0	95
NNW	2	14	15	12	3	0	46
Variable	0	0	0	0	0	0	0
Total	29	223	384	244	43	1	924

Hours of calm in this stability class: 0
 Hours of missing wind measurements in this stability class: 0
 Hours of missing stability measurements in all stability classes: 3

Byron Generating Station

Period of Record: July - September 2022
 Stability Class - Slightly Stable - 250Ft-30Ft Delta-T (F)
 Winds Measured at 250 Feet

Wind Direction	Wind Speed (in mph)						Total
	1-3	4-7	8-12	13-18	19-24	> 24	
N	2	6	13	9	0	0	30
NNE	0	5	19	6	1	0	31
NE	1	7	13	18	0	0	39
ENE	2	10	6	2	0	0	20
E	0	5	16	8	1	0	30
ESE	1	5	2	6	2	0	16
SE	1	6	11	7	0	0	25
SSE	0	3	12	29	4	0	48
S	0	3	13	45	21	0	82
SSW	3	4	11	51	10	1	80
SW	3	1	16	14	12	0	46
WSW	0	1	7	8	3	3	22
W	2	3	11	14	4	0	34
WNW	0	5	18	31	0	0	54
NW	0	4	12	26	0	0	42
NNW	0	8	1	9	0	0	18
Variable	0	0	0	0	0	0	0
Total	15	76	181	283	58	4	617

Hours of calm in this stability class: 0
 Hours of missing wind measurements in this stability class: 0
 Hours of missing stability measurements in all stability classes: 3

Byron Generating Station

Period of Record: July - September 2022
 Stability Class - Moderately Stable - 250Ft-30Ft Delta-T (F)
 Winds Measured at 250 Feet

Wind Direction	Wind Speed (in mph)						Total
	1-3	4-7	8-12	13-18	19-24	> 24	
N	1	2	5	5	0	0	13
NNE	3	2	4	3	0	0	12
NE	1	2	0	1	0	0	4
ENE	2	14	6	4	0	0	26
E	1	7	23	12	1	0	44
ESE	0	3	3	2	2	0	10
SE	0	1	8	8	5	0	22
SSE	0	0	4	14	5	0	23
S	2	0	2	30	15	0	49
SSW	0	5	5	13	3	0	26
SW	0	2	6	4	1	0	13
WSW	0	0	7	5	0	0	12
W	0	2	9	7	0	0	18
WNW	2	2	11	12	0	0	27
NW	0	2	15	21	0	0	38
NNW	0	2	8	2	0	0	12
Variable	0	0	0	0	0	0	0
Total	12	46	116	143	32	0	349

Hours of calm in this stability class: 0
 Hours of missing wind measurements in this stability class: 0
 Hours of missing stability measurements in all stability classes: 3

Byron Generating Station

Period of Record: July - September 2022
 Stability Class - Extremely Stable - 250Ft-30Ft Delta-T (F)
 Winds Measured at 250 Feet

Wind Direction	Wind Speed (in mph)						Total
	1-3	4-7	8-12	13-18	19-24	> 24	
N	1	3	3	1	0	0	8
NNE	0	3	2	1	0	0	6
NE	1	2	0	0	0	0	3
ENE	1	4	0	0	0	0	5
E	1	0	2	1	0	0	4
ESE	0	1	7	3	3	0	14
SE	1	0	5	12	2	0	20
SSE	0	1	1	3	2	0	7
S	0	3	1	7	4	0	15
SSW	1	1	8	7	1	0	18
SW	2	3	3	1	0	0	9
WSW	1	4	5	1	0	0	11
W	2	12	0	1	0	0	15
WNW	0	12	9	2	0	0	23
NW	1	5	4	2	0	0	12
NNW	1	3	11	0	0	0	15
Variable	0	0	0	0	0	0	0
Total	13	57	61	42	12	0	185

Hours of calm in this stability class: 4
 Hours of missing wind measurements in this stability class: 0
 Hours of missing stability measurements in all stability classes: 3

Byron Generating Station

Period of Record: October - December 2022
 Stability Class - Extremely Unstable - 250Ft-30Ft Delta-T (F)
 Winds Measured at 30 Feet

Wind Direction	Wind Speed (in mph)						Total
	1-3	4-7	8-12	13-18	19-24	> 24	
N	0	0	0	0	0	0	0
NNE	0	0	0	0	0	0	0
NE	1	0	0	0	0	0	1
ENE	0	0	1	0	0	0	1
E	0	0	0	0	0	0	0
ESE	0	0	0	0	0	0	0
SE	0	0	0	0	0	0	0
SSE	0	0	0	0	0	0	0
S	0	0	0	0	0	0	0
SSW	0	0	0	0	0	0	0
SW	0	0	0	0	0	0	0
WSW	0	0	0	1	0	0	1
W	0	1	2	1	0	0	4
WNW	0	0	0	0	0	0	0
NW	0	0	0	0	0	0	0
NNW	0	0	0	0	0	0	0
Variable	0	0	0	0	0	0	0
Total	1	1	3	2	0	0	7

Hours of calm in this stability class: 0
 Hours of missing wind measurements in this stability class: 0
 Hours of missing stability measurements in all stability classes: 0

Byron Generating Station

Period of Record: October - December 2022
 Stability Class - Moderately Unstable - 250Ft-30Ft Delta-T (F)
 Winds Measured at 30 Feet

Wind Direction	Wind Speed (in mph)						Total
	1-3	4-7	8-12	13-18	19-24	> 24	
N	0	0	3	0	0	0	3
NNE	0	0	0	0	0	0	0
NE	0	1	1	0	0	0	2
ENE	0	1	0	0	0	0	1
E	0	0	0	0	0	0	0
ESE	0	0	0	0	0	0	0
SE	0	0	0	0	0	0	0
SSE	0	0	0	0	0	0	0
S	0	0	0	0	0	0	0
SSW	0	0	0	0	0	0	0
SW	0	0	2	0	0	0	2
WSW	0	0	0	0	0	0	0
W	0	1	1	0	0	0	2
WNW	0	0	0	0	0	0	0
NW	0	0	0	0	0	0	0
NNW	0	0	0	0	0	0	0
Variable	0	0	0	0	0	0	0
Total	0	3	7	0	0	0	10

Hours of calm in this stability class: 0
 Hours of missing wind measurements in this stability class: 0
 Hours of missing stability measurements in all stability classes: 0

Byron Generating Station

Period of Record: October - December 2022
 Stability Class - Slightly Unstable - 250Ft-30Ft Delta-T (F)
 Winds Measured at 30 Feet

Wind Direction	Wind Speed (in mph)						Total
	1-3	4-7	8-12	13-18	19-24	> 24	
N	0	0	1	0	0	0	1
NNE	0	0	3	0	0	0	3
NE	1	1	0	0	0	0	2
ENE	0	0	0	0	0	0	0
E	0	1	0	0	0	0	1
ESE	0	2	0	0	0	0	2
SE	0	0	0	1	0	0	1
SSE	0	0	0	2	0	0	2
S	0	0	0	1	0	0	1
SSW	0	0	0	0	0	0	0
SW	0	1	0	0	0	0	1
WSW	0	0	0	1	0	0	1
W	0	0	1	1	0	0	2
WNW	0	1	1	1	0	0	3
NW	0	1	1	0	0	0	2
NNW	0	0	1	0	0	0	1
Variable	0	0	0	0	0	0	0
Total	1	7	8	7	0	0	23

Hours of calm in this stability class: 0
 Hours of missing wind measurements in this stability class: 0
 Hours of missing stability measurements in all stability classes: 0

Byron Generating Station

Period of Record: October - December 2022
 Stability Class - Neutral - 250Ft-30Ft Delta-T (F)
 Winds Measured at 30 Feet

Wind Direction	Wind Speed (in mph)						Total
	1-3	4-7	8-12	13-18	19-24	> 24	
N	1	14	11	1	0	0	27
NNE	0	8	1	1	0	0	10
NE	2	8	1	0	0	0	11
ENE	2	11	5	0	0	0	18
E	4	23	16	0	0	0	43
ESE	4	15	8	12	1	0	40
SE	3	21	11	5	0	0	40
SSE	2	9	18	25	8	0	62
S	3	6	32	29	2	0	72
SSW	1	12	21	23	6	0	63
SW	4	20	35	9	0	0	68
WSW	5	11	36	51	2	0	105
W	1	17	47	77	20	2	164
WNW	0	16	52	62	29	0	159
NW	7	23	44	39	0	0	113
NNW	1	11	27	2	0	0	41
Variable	0	0	0	0	0	0	0
Total	40	225	365	336	68	2	1036

Hours of calm in this stability class: 0
 Hours of missing wind measurements in this stability class: 0
 Hours of missing stability measurements in all stability classes: 0

Byron Generating Station

Period of Record: October - December 2022
 Stability Class - Slightly Stable - 250Ft-30Ft Delta-T (F)
 Winds Measured at 30 Feet

Wind Direction	Wind Speed (in mph)						Total
	1-3	4-7	8-12	13-18	19-24	> 24	
N	7	20	8	0	0	0	35
NNE	4	8	3	0	0	0	15
NE	4	13	2	0	0	0	19
ENE	5	11	11	0	0	0	27
E	5	26	9	10	0	0	50
ESE	6	11	17	9	8	0	51
SE	1	8	10	1	0	0	20
SSE	3	10	51	34	3	0	101
S	3	12	30	59	2	0	106
SSW	3	19	21	15	0	0	58
SW	5	34	11	10	0	0	60
WSW	2	20	12	5	1	0	40
W	3	27	25	6	3	0	64
WNW	3	11	11	0	2	0	27
NW	5	7	29	2	0	0	43
NNW	5	12	4	1	0	0	22
Variable	0	0	0	0	0	0	0
Total	64	249	254	152	19	0	738

Hours of calm in this stability class: 0
 Hours of missing wind measurements in this stability class: 0
 Hours of missing stability measurements in all stability classes: 0

Byron Generating Station

Period of Record: October - December 2022
 Stability Class - Moderately Stable - 250Ft-30Ft Delta-T (F)
 Winds Measured at 30 Feet

Wind Direction	Wind Speed (in mph)						Total
	1-3	4-7	8-12	13-18	19-24	> 24	
N	4	1	0	0	0	0	5
NNE	1	4	0	0	0	0	5
NE	2	5	0	0	0	0	7
ENE	2	4	1	0	0	0	7
E	6	20	1	0	0	0	27
ESE	1	14	3	0	0	0	18
SE	2	5	1	0	0	0	8
SSE	3	11	45	4	0	0	63
S	2	12	3	0	0	0	17
SSW	6	10	0	0	0	0	16
SW	8	7	0	0	0	0	15
WSW	5	6	1	0	0	0	12
W	6	5	2	0	0	0	13
WNW	8	2	1	0	0	0	11
NW	6	0	0	0	0	0	6
NNW	1	2	0	0	0	0	3
Variable	0	0	0	0	0	0	0
Total	63	108	58	4	0	0	233

Hours of calm in this stability class: 0
 Hours of missing wind measurements in this stability class: 0
 Hours of missing stability measurements in all stability classes: 0

Byron Generating Station

Period of Record: October - December 2022
 Stability Class - Extremely Stable - 250Ft-30Ft Delta-T (F)
 Winds Measured at 30 Feet

Wind Direction	Wind Speed (in mph)						Total
	1-3	4-7	8-12	13-18	19-24	> 24	
N	2	0	0	0	0	0	2
NNE	1	0	0	0	0	0	1
NE	1	0	0	0	0	0	1
ENE	4	1	0	0	0	0	5
E	3	6	0	0	0	0	9
ESE	4	9	3	0	0	0	16
SE	3	10	1	0	0	0	14
SSE	5	9	12	0	0	0	26
S	14	16	0	0	0	0	30
SSW	11	4	0	0	0	0	15
SW	9	0	0	0	0	0	9
WSW	4	0	0	0	0	0	4
W	9	0	0	0	0	0	9
WNW	7	0	0	0	0	0	7
NW	5	1	0	0	0	0	6
NNW	4	1	0	0	0	0	5
Variable	0	0	0	0	0	0	0
Total	86	57	16	0	0	0	159

Hours of calm in this stability class: 2
 Hours of missing wind measurements in this stability class: 0
 Hours of missing stability measurements in all stability classes: 0

Byron Generating Station

Period of Record: October - December 2022
 Stability Class - Extremely Unstable - 250Ft-30Ft Delta-T (F)
 Winds Measured at 250 Feet

Wind Direction	Wind Speed (in mph)						Total
	1-3	4-7	8-12	13-18	19-24	> 24	
N	0	0	0	0	0	0	0
NNE	0	0	0	0	0	0	0
NE	0	0	0	0	0	0	0
ENE	1	0	1	0	0	0	2
E	0	0	0	0	0	0	0
ESE	0	0	0	0	0	0	0
SE	0	0	0	0	0	0	0
SSE	0	0	0	0	0	0	0
S	0	0	0	0	0	0	0
SSW	0	0	0	0	0	0	0
SW	0	0	0	0	0	0	0
WSW	0	0	0	0	1	0	1
W	0	0	1	3	0	0	4
WNW	0	0	0	0	0	0	0
NW	0	0	0	0	0	0	0
NNW	0	0	0	0	0	0	0
Variable	0	0	0	0	0	0	0
Total	1	0	2	3	1	0	7

Hours of calm in this stability class: 0
 Hours of missing wind measurements in this stability class: 0
 Hours of missing stability measurements in all stability classes: 0

Byron Generating Station

Period of Record: October - December2022
 Stability Class - Moderately Unstable - 250Ft-30Ft Delta-T (F)
 Winds Measured at 250 Feet

Wind Direction	Wind Speed (in mph)						Total
	1-3	4-7	8-12	13-18	19-24	> 24	
N	0	0	3	0	0	0	3
NNE	0	0	0	0	0	0	0
NE	0	0	0	0	0	0	0
ENE	0	0	3	0	0	0	3
E	0	0	0	0	0	0	0
ESE	0	0	0	0	0	0	0
SE	0	0	0	0	0	0	0
SSE	0	0	0	0	0	0	0
S	0	0	0	0	0	0	0
SSW	0	0	0	0	0	0	0
SW	0	0	2	0	0	0	2
WSW	0	0	0	0	0	0	0
W	0	0	1	1	0	0	2
WNW	0	0	0	0	0	0	0
NW	0	0	0	0	0	0	0
NNW	0	0	0	0	0	0	0
Variable	0	0	0	0	0	0	0
Total	0	0	9	1	0	0	10

Hours of calm in this stability class: 0
 Hours of missing wind measurements in this stability class: 0
 Hours of missing stability measurements in all stability classes: 0

Byron Generating Station

Period of Record: October - December 2022
 Stability Class - Slightly Unstable - 250Ft-30Ft Delta-T (F)
 Winds Measured at 250 Feet

Wind Direction	Wind Speed (in mph)						Total
	1-3	4-7	8-12	13-18	19-24	> 24	
N	0	0	0	0	0	0	0
NNE	0	0	4	0	0	0	4
NE	1	0	1	0	0	0	2
ENE	0	0	0	0	0	0	0
E	0	0	1	0	0	0	1
ESE	0	0	2	0	0	0	2
SE	0	0	0	0	0	1	1
SSE	0	0	0	0	0	2	2
S	0	0	0	0	1	0	1
SSW	0	0	0	0	0	0	0
SW	0	1	0	0	0	0	1
WSW	0	0	0	0	1	0	1
W	0	0	0	1	1	0	2
WNW	0	2	0	1	1	0	4
NW	0	0	1	0	0	0	1
NNW	0	0	1	0	0	0	1
Variable	0	0	0	0	0	0	0
Total	1	3	10	2	4	3	23

Hours of calm in this stability class: 0
 Hours of missing wind measurements in this stability class: 0
 Hours of missing stability measurements in all stability classes: 0

Byron Generating Station

Period of Record: October - December 2022
 Stability Class - Neutral - 250Ft-30Ft Delta-T (F)
 Winds Measured at 250 Feet

Wind Direction	Wind Speed (in mph)						Total
	1-3	4-7	8-12	13-18	19-24	> 24	
N	2	6	7	10	0	1	26
NNE	0	6	4	1	1	0	12
NE	0	5	5	0	0	0	10
ENE	1	10	3	2	0	0	16
E	1	10	19	16	1	0	47
ESE	3	8	10	12	7	2	42
SE	3	9	18	1	6	1	38
SSE	1	5	15	10	17	12	60
S	0	3	13	31	20	7	74
SSW	0	7	8	22	19	7	63
SW	2	11	15	30	8	1	67
WSW	1	14	22	33	37	0	107
W	0	3	29	49	55	29	165
WNW	0	6	35	31	46	30	148
NW	2	6	40	34	31	2	115
NNW	0	10	19	14	3	0	46
Variable	0	0	0	0	0	0	0
Total	16	119	262	296	251	92	1036

Hours of calm in this stability class: 0
 Hours of missing wind measurements in this stability class: 0
 Hours of missing stability measurements in all stability classes: 0

Byron Generating Station

Period of Record: October - December 2022
 Stability Class - Slightly Stable - 250Ft-30Ft Delta-T (F)
 Winds Measured at 250 Feet

Wind Direction	Wind Speed (in mph)						Total
	1-3	4-7	8-12	13-18	19-24	> 24	
N	0	6	11	11	0	0	28
NNE	0	5	8	6	1	0	20
NE	1	8	12	4	0	0	25
ENE	1	5	10	3	5	0	24
E	1	5	12	17	9	6	50
ESE	1	9	5	13	14	11	53
SE	0	2	4	8	1	1	16
SSE	1	3	6	12	36	14	72
S	0	1	4	19	70	26	120
SSW	0	3	9	28	24	8	72
SW	0	1	9	23	17	3	53
WSW	0	2	16	25	5	2	50
W	0	2	17	38	5	3	65
WNW	0	2	7	13	2	2	26
NW	1	3	7	27	5	0	43
NNW	1	4	6	10	0	0	21
Variable	0	0	0	0	0	0	0
Total	7	61	143	257	194	76	738

Hours of calm in this stability class: 0
 Hours of missing wind measurements in this stability class: 0
 Hours of missing stability measurements in all stability classes: 0

Byron Generating Station

Period of Record: October - December 2022
 Stability Class - Moderately Stable - 250Ft-30Ft Delta-T (F)
 Winds Measured at 250 Feet

Wind Direction	Wind Speed (in mph)						Total
	1-3	4-7	8-12	13-18	19-24	> 24	
N	1	3	1	1	0	0	6
NNE	0	0	0	0	0	0	0
NE	0	3	5	1	0	0	9
ENE	0	0	6	6	0	0	12
E	0	3	5	3	2	0	13
ESE	0	3	7	12	2	1	25
SE	1	2	4	1	3	0	11
SSE	0	1	7	3	2	0	13
S	1	0	2	11	40	5	59
SSW	0	0	4	2	2	0	8
SW	0	0	4	16	1	0	21
WSW	0	3	3	10	0	0	16
W	0	2	3	6	0	0	11
WNW	0	2	6	6	0	0	14
NW	0	2	3	2	0	0	7
NNW	1	4	2	1	0	0	8
Variable	0	0	0	0	0	0	0
Total	4	28	62	81	52	6	233

Hours of calm in this stability class: 0
 Hours of missing wind measurements in this stability class: 0
 Hours of missing stability measurements in all stability classes: 0

Byron Generating Station

Period of Record: October - December 2022
 Stability Class - Extremely Stable - 250Ft-30Ft Delta-T (F)
 Winds Measured at 250 Feet

Wind Direction	Wind Speed (in mph)						Total
	1-3	4-7	8-12	13-18	19-24	> 24	
N	3	1	0	0	0	0	4
NNE	0	0	0	0	0	0	0
NE	1	2	4	0	0	0	7
ENE	2	3	2	0	0	0	7
E	0	0	0	2	0	0	2
ESE	0	0	3	4	2	0	9
SE	0	1	9	13	3	0	26
SSE	0	1	2	6	3	0	12
S	0	0	4	8	10	0	22
SSW	0	0	6	13	4	0	23
SW	0	7	8	8	0	0	23
WSW	1	2	6	1	0	0	10
W	1	0	4	3	0	0	8
WNW	0	1	1	1	0	0	3
NW	1	0	2	0	0	0	3
NNW	1	0	1	0	0	0	2
Variable	0	0	0	0	0	0	0
Total	10	18	52	59	22	0	161

Hours of calm in this stability class: 0
 Hours of missing wind measurements in this stability class: 0
 Hours of missing stability measurements in all stability classes: 0